

MOSQUITOES STUDIES (Diptera, Culicidae)

V. MOSQUITOES ORIGINALLY DESCRIBED FROM

MIDDLE AMERICA¹

By

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INTRODUCTION

For the project on the "Mosquitoes of Middle America" (Belkin, Schick et al 1965) an effort is being made to obtain adequate reared material with all the stages associated of all the nominal species of mosquitoes originally described from all the countries covered by the project. To facilitate collecting by co-operators, the present paper has been prepared listing the species and localities together with all the available data about the source of the original type material. The countries or islands are arranged in an alphabetical order and for each there is a List of Species followed by a List of Localities.

The List of Species consists of all the nominal species, valid or currently considered as synonyms, arranged in the sequence followed in "A synoptic catalog of the mosquitoes of the world" (Stone, Knight and Starcke 1959; Stone 1961, 1963). For subspecies and junior synonyms, the species or senior synonyms in the taxonomic treatment of the catalog are shown in [brackets]. A nominal species marked with an asterisk (*) is the type species of a generic group taxon.

Under TYPE, all the available data pertaining to the type material are given as derived from the original description and other published sources. Type specimens were not examined in the preparation of this paper and therefore in many instances the kind of type specimen(s) (holotype or syntypes) could not be determined; possibly some lectotype selections were missed. The number in parentheses following the sex or stage of the type(s) indicates the collection or rearing number. In the statement of the type locality [brackets] are

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used to inclose corrections and (parentheses) for major political divisions, such as provinces or states. Dates of the type collection and collectors are given whenever they could be determined. At the end of the type data, enclosed in parentheses, is an indication of the type depository, abbreviated as in the catalog, together with references to lectotype selections or other published statements regarding the types.

Under BIONOMICS, all the available data about the original collection are given directly, first for the immature stages and then for the adults. Data enclosed in [brackets] are supplied from other sources when none were given for the original collection. Such data should be used only as a general guide for locating the probable breeding sites.

The List of Localities is arranged alphabetically by state, province or other major political subdivision and within each of these, alphabetically by the specific locality itself. The number preceding the nominal species refers to the number assigned to it in the list of species.

The general plan is to obtain unequivocally associated immature stages and sexes of every nominal species in the list. This can be done in either of two ways, depending upon the stages encountered: (1) individual rearings of field-collected immature stages, primarily larvae but sometimes pupae or eggs, or (2) progeny rearings from field-collected females. For the collection, rearing and preservation, the methods outlined by Belkin, Hogue et al (1965) should be followed. An effort should be made to obtain for each nominal species at least 20 individual rearings or 9 progeny rearings and to preserve at least 20 whole larvae, 20 whole pupae, 20 males and 20 females, and to mass rear and preserve all the rest of the material that can be readily collected.

Collections of immature stages should be made in the same type of breeding site as that specified for the original collection but other breeding sites should also be sampled. When the breeding site is not definitely known, the suggested probable larval habitats should be thoroughly sampled as well as similar habitats, e.g. all types of ground waters (lakes, ponds, swamps, streams, pools, etc.) for species using a specific type of ground water, and all type of containers (treeholes, leaf axils, flower bracts, etc.) for container breeders. The list of breeding sites on the collection record form and the accompanying discussions in Belkin, Hogue et al (1965) provide a general guide to the various types of breeding sites and should be followed.

Whenever possible, collections should be made in the exact type localities. In many instances, however, these may have been destroyed through urbanization, industrialization, road building, water empoundments and similar activities or may no longer be accessible. In such instances, an effort should be made to collect in a habitat similar to the original one at a site as close as possible to the original type locality, preferably in the same drainage system and at the same elevation.

ANTIGUA

List of Species

1. Anopheles (Nyssorhynchus) albipes Theobald, 1901; tarsimaculatus Goeldi, 1905, new name [= albimanus]. TYPE: ♂, ♀, Antigua Island, W. R. Forrest; also from Brazil, British Guiana and Jamaica (BM). BIONOMICS: [Larvae in vegetation in sunlit permanent ground waters].

2. *Uranotaenia apicalis* Theobald, 1903. TYPE: ♂, ♀, Antigua Island, Jan, W. R. Forrest (BM). BIONOMICS: [Larvae reported from open swamps with abundant aquatic vegetation, in *Pistia* as well as in emergent vegetation. Adults commonly attracted to light traps].

3. *Psorophora* (*Grabhamia*) *pygmaea* (Theobald, 1903). TYPE: Adults, Antigua Island, Aug, W. R. Forrest (BM). BIONOMICS: [Larvae in temporary rain pools. Females readily attracted to light traps].

4. *Psorophora* (*Grabhamia*) *antiguae* (Giles, 1904) [= *pygmaea*]. TYPE: ♀, Antigua Island (BM). BIONOMICS: [As for *pygmaea* above].

5. *Aedes* (*Ochlerotatus*) *niger* (Giles, 1904) [= *taeniorhynchus*]. TYPE: ♀, Antigua Island, 21 July 1901, W. R. Forrest (BM). BIONOMICS: [Larvae primarily in ground pools in salt marshes, occasionally in freshwater pools nearby. Females bite during day and night and are attracted to light traps].

List of Localities

All species from Antigua Island are from unspecified localities.

BAHAMA ISLANDS

List of Species

1. *Wyeomyia* (W.) *bahama* Dyar & Knab, 1906. TYPE: Holotype ♀, Tarpon Bay [Tarpum Bay], Eleuthera Island, 7 July 1903, T. H. Coffin (USNM, 9990). BIONOMICS: [Larvae probably in leaf axils of bromeliads].

2. *Psorophora* (*Janthinosoma*) *coffini* (Dyar & Knab, 1906) [= *johnstonii*]. TYPE: Holotype ♀, Nassau, New Providence Island, 22 June 1903, T. H. Coffin (USNM, 9960). BIONOMICS: [Larvae in shallow, temporary, shaded, rain-filled depressions. Females bite any time during day in shade and in the open].

3. *Aedes* (*Ochlerotatus*) *condolenscens* Dyar & Knab, 1907. TYPE: Holotype ♀ (10), Nassau, New Providence Island, 24 June 1903, T. H. Coffin (USNM, 10248). BIONOMICS: [Larvae probably in temporary rain pools].

4. *Aedes* (O.) *obturbator* Dyar & Knab, 1907. TYPE: Holotype ♀, Tarpon Bay [Tarpum Bay], Eleuthera Island, 7 July 1903, T. H. Coffin (USNM, 10141). BIONOMICS: [Larvae probably in shaded temporary pools]. Holotype captured in woods.

5. *Aedes* (O.) *plutocraticus* Dyar & Knab, 1907 [= *tortilis*]. TYPE: Holotype ♀ (10), Nassau, New Providence Island, 21 June 1903, T. H. Coffin (USNM, 10251). BIONOMICS: [Larvae in temporary ground pools].

6. *Culex* (C.) *bahamensis* Dyar & Knab, 1906. TYPE: Lectotype larva, Bahama Islands, date not specified, T. H. Coffin (USNM; selection of Stone and Knight 1957a: 43). BIONOMICS: [Larvae in temporary and permanent ground pools, in mangrove swamps and rockholes along seashore].

*7. *Culex* (C.) *eleuthera* Dyar, 1918 [= *bahamensis*]. TYPE: Lectotype ♂ (19), Governor's Harbour, Eleuthera Island, 6 July 1903, T. H. Coffin (USNM, 21570; selection of Stone and Knight 1957a: 48). BIONOMICS: [See above under *bahamensis*].

8. *Culex* (C.) *aseyehae* Dyar & Knab, 1915 [= *pipiens quinquefasciatus*]. TYPE: Lectotype ♂, genitalia on slide (748), New Providence Island, 1915, H. G. Dyar (USNM, 19978; selection of Stone and Knight 1957a: 43). BIONOMICS: Larvae in water in coral rockhole outside of town, in association with

Culex similis and C. sphinx.

9. Culex (C.) scimitar Branch & Seabrook, 1959. TYPE: Holotype ♀, Hog Island, Oct 1958, E. L. Seabrook and F. W. Hardin (USNM). BIONOMICS: Larvae in crabholes and ground pools among fallen cattails and palm fronds on perimeter of a swamp.

10. Culex (C.) sphinx Howard, Dyar & Knab, 1913. TYPE: Lectotype ♂ (142) with genitalia on slide (394), Nassau, New Providence Island, 2 July 1903, T. H. Coffin (USNM, 12195; selection of Stone and Knight 1957a: 56). BIONOMICS: Larvae in natural shallow pools in coral rocks.

List of Localities

BAHAMA ISLANDS (Locality not specified)

Probably near Nassau, New Providence Island: 6. Culex (C.) bahamensis.

ELEUTHERA ISLAND

Governor's Harbour: 7. Culex (C.) eleuthera.

Tarpum Bay: 1. Wyeomyia (W.) bahama; 4. Aedes (O.) obturbator.

HOG ISLAND

Locality not specified: 9. Culex (C.) scimitar.

NEW PROVIDENCE ISLAND

Locality not specified, near Nassau: 8. Culex (C.) aseyehae.

Nassau: 2. Psorophora (J.) coffini; 3. Aedes (O.) condolenscens; 5. Aedes (O.) plutocraticus; 10. Culex (C.) sphinx.

BARBADOS

List of Species

1. Culex (C.) palus Theobald, 1903 [= nigripalpus]. TYPE: ♂, Barbados, June, G. C. Low; also ♀ from St. Vincent (BM). BIONOMICS: Larvae in a swamp.

2. Culex (C.) caraibeus Howard, Dyar & Knab, 1913 [= nigripalpus]. TYPE: Lectotype ♀ (59), Barbados Island, 15 July 1905, A. Busck (USNM, 12207; selection of Stone and Knight 1957a: 45). BIONOMICS: Larvae in an open pool in coral rock.

BRITISH GUIANA

List of Species

*1. Anopheles (Stethomyia) nimbus (Theobald, 1902). TYPE: ♂, ♀, Cabacaburi, Pomeroon River (Essequibo), G. C. Low (BM). BIONOMICS: [Larvae probably in deeply shaded stream bed pools].

2. Anopheles (Nyssorhynchus) albipes Theobald, 1901; tarsimaculatus Goeldi, 1905, new name [= albimanus]. TYPE: ♂, ♀, British Guiana, date not specified, E. D. Rowland; also from Antigua, Brazil and Jamaica (BM). BIONOMICS: [Larvae in vegetation in sunlit permanent ground waters].

*3. Trichoprosopon (Runchomyia) frontosum (Theobald, 1903). TYPE:

Holotype ♀, Barima River, Pomeroon Mission (Essequibo), Aug, G. C. Low (BM). BIONOMICS: [Predaceous larvae in leaf axils of bromeliads]. Type females collected on a river bank in virgin forest, about 70 miles from the coast.

4. Wyeomyia (W.) bodkini Edwards, 1922 [= aphobema]. TYPE: ♂, ♀, Is-sororo, N. W. District (Essequibo), Sept 1921, G. E. Bodkin (BM). BIONOMICS: Larvae in a pineapple plant.

5. Wyeomyia (W.) quasiluteoventralis (Theobald, 1903). TYPE: ♀, Moranhanna [Morawhanna], Barima River (Essequibo) and Demerara River (Demerara), date not specified, G. C. Low (BM). BIONOMICS: [Larvae probably in leaf axils of bromeliads, epiphytic and/or terrestrial].

6. Wyeomyia (Antunesmyia) flavifacies Edwards, 1922. TYPE: Holotype ♀, Aruka River (Essequibo), 16 Sept 1921, G. E. Bodkin (BM). BIONOMICS: Larvae in leaf axils of bromeliads.

7. Wyeomyia (Dendromyia) moerbista (Dyar & Knab, 1919). TYPE: Holotype ♀, Rupununi River (Essequibo), date not specified, K. S. Wise (USNM, 21995). BIONOMICS: [Larvae probably in bamboo or treeholes, possibly in leaf axils].

8. Wyeomyia (D.) ulocoma (Theobald, 1903). TYPE: 4 ♀, Demerara River (Demerara), date not specified, G. C. Low (BM). BIONOMICS: [Larvae probably in Heliconia inflorescences]. Type series collected in forest at 12 noon in subdued light.

9. Limatus asulleptus (Theobald, 1903). TYPE: ♀, Demerara River (Demerara), date not specified, G. C. Low (BM). BIONOMICS: [Larvae probably in broken bamboo, plant containers on ground, artificial containers and possibly treeholes]. Type series collected in forest at 12 noon in subdued light.

10. Sabethes (S.) schausi Dyar & Knab, 1908 [= belisarioi]. TYPE: Holotype ♀, Omai (Essequibo), date not specified, W. Schaus (USNM, 11973). BIONOMICS: [Larvae probably in treeholes or bamboo].

11. Sabethes (S.) chroiopus Dyar & Knab, 1913 [= bipartipes]. TYPE: Holotype ♂, Potaro Highlands (Essequibo), May 1909, de Freitas (USNM, 15999). BIONOMICS: [Larvae probably in treeholes or bamboo].

12. Mansonia (M.) humeralis Dyar & Knab, 1916. TYPE: Holotype ♀, Georgetown (Demerara), Dec 1915, H. W. B. Moore (USNM, 20366). BIONOMICS: [Larvae probably attached to Pistia].

13. Uranotaenia leucoptera (Theobald, 1907). TYPE: Holotype ♂, Stanley Town, New Amsterdam (Berbice), Aug, E. D. Rowland (BM). BIONOMICS: [Larvae probably at extreme edges of extensive freshwater marshes].

14. Uranotaenia minuta Theobald, 1907 [= lowii]. TYPE: Holotype ♀, New Amsterdam (Berbice), Jan, E. D. Rowland (BM). BIONOMICS: [Larvae probably in large lowland swamps or in other sunlit ground waters with some aquatic vegetation. Adults probably attracted to light traps].

*15. Uranotaenia rowlandii (Theobald, 1905) [= nataliae]. TYPE: ♂, ♀, Stanley Town, New Amsterdam (Berbice), date and collector not specified (BM). BIONOMICS: [Larvae probably in large open swamps with abundant aquatic vegetation such as Pistia and sedges].

*16. Aedes (Ochlerotatus) serratus (Theobald, 1901). TYPE: ♂, ♀ (61), New Amsterdam, Feb, E. D. Rowland; also Brazil and Trinidad (BM). BIONOMICS: [Larvae in temporary ground pools and flooded edges of forested swamps].

17. Aedes (O.) nubilus (Theobald, 1903) [= serratus]. TYPE: 5 ♀, Pomeroon Mission (Essequibo) and Christianburg River (Demerara), date not specified, G. C. Low (BM). BIONOMICS: [Larvae as for serratus above]. Type

series collected in the bush.

18. Aedes (Stegomyia) luciensis (Theobald, 1901) [= aegypti]. TYPE: ♂, ♀, Georgetown (Demerara), 16 June 1899, J. J. Quelch; also St. Lucia (BM). BIONOMICS: [Larvae in domestic artificial containers].

*19. Haemagogus (Stegoconops) albomaculatus Theobald, 1903. TYPE: Holotype ♀, Cara Cara [Kara-Kara], Demerara River (Demerara) and Pomeroon River (Essequibo), date not specified, G. C. Low (BM). BIONOMICS: [Larvae probably in treeholes or bamboo].

20. Culex (C.) lateropunctata Theobald, 1907 [= mollis]. TYPE: Holotype ♀, Supenaam River (Essequibo), Oct, E. D. Rowland (BM). BIONOMICS: [Larvae probably in rockholes, treeholes or swamps].

21. Culex (C.) microannulata (Theobald, 1907) [= nigripalpus]. TYPE: Holotype ♂, Stanley Town, New Amsterdam (Berbice), July, E. D. Rowland (BM). BIONOMICS: [Larvae probably in various types of permanent ground waters].

22. Culex (Melanoconion) aikenii (Aiken & Rowland, 1906). TYPE: Larvae, New Amsterdam (Berbice), date and collector not specified (LU). BIONOMICS: [Larvae probably in swamps and stream margins].

*23. Culex (Mel.) inornatus (Theobald, 1905) [= aikenii]. TYPE: ♀, New Amsterdam (Berbice), date and collector not specified (BM). BIONOMICS: [Larvae as under aikenii above].

24. Culex (Mel.) ocosa Dyar & Knab, 1919 [= aikenii]. TYPE: Lectotype ♂ (14) with genitalia slide, Georgetown (Demerara), Mar 1910, H. W. B. Moore (USNM, 21705; selection of Stone and Knight 1957a: 54). BIONOMICS: [Larvae as under aikenii above].

*25. Culex (Mel.) epirus Aiken, 1909. TYPE: ♀, Courantyne River [Courantyne River] (Berbice), date and collector not specified (LU). BIONOMICS: [Larvae probably in permanent ground waters].

26. Culex (Mel.) moorei Dyar, 1918 [= erraticus]. TYPE: Lectotype ♂ (19) with genitalia slide (571), Plantation Plaisance, Georgetown (Demerara), 10 Apr 1910, H. W. B. Moore (USNM, 21573; selection of Stone and Knight 1957a: 53). BIONOMICS: Larvae in ditch.

List of Localities

BERBICE

Courantyne River: 25. Culex (Mel.) epirus.

New Amsterdam: 14. Uranotaenia minuta; 16. Aedes (O.) serratus; 22. Culex (Mel.) aikenii; 23. Culex (Mel.) inornatus.

New Amsterdam, Stanley Town: 13. Uranotaenia leucoptera; 15. Uranotaenia rowlandii; 21. Culex (C.) microannulata.

BRITISH GUIANA (Locality not specified)

Probably near Georgetown: 2. Anopheles (N.) albipes.

DEMERARA

Christianburg River: 17. Aedes (O.) nubilus.

Demerara River: 5. Wyeomyia (W.) quasiluteoventralis; 8. Wyeomyia (D.) ulocoma; 9. Limatus asulleptus; 19. Haemagogus (S.) albomaculatus (Kara-Kara).

Georgetown: 12. Mansonia humeralis; 18. Aedes (S.) luciensis; 24. Culex (Mel.) ocosa; 26. Culex (Mel.) moorei (Plantation Plaisance).

ESSEQUIBO

Aruka River: 6. Wyeomyia (A.) flavifacies.

Barima River, Morawhanna: 5. Wyeomyia (W.) quasiluteoventralis.

Barima River, Pomeroon Mission: 3. Trichoprosopon (R.) frontosum; 17. Aedes (O.) nubilus.

Issororo: 4. Wyeomyia (W.) bodkini.

Omai: 10. Sabethes (S.) schausi.

Pomeroon River: 19. Haemagogus (S.) albomaculatus.

Pomeroon River, Cabacaburi: 1. Anopheles (S.) nimbus.

Potaro Highlands: 11. Sabethes (S.) chroiopus.

Rupununi River: 7. Wyeomyia (D.) moerbista.

Supenaam River: 20. Culex (C.) lateropunctata.

BRITISH HONDURAS

List of Species

1. Uranotaenia bicolor Martini, 1935; martinii Lane, 1943, new name [= hystera]. TYPE: Holotype ♀, 5 km south of Río Cacao (Orange Walk), 16 Oct 1925, A. Dampf (BM). BIONOMICS: [Larvae probably in swamps, stream margins or other permanent ground waters]. Holotype collected in virgin forest.

2. Uranotaenia modesta Martini, 1935 [= pulcherrima]. TYPE: Holotype ♀, 5 km south of Río Cacao (Orange Walk), 16 Oct 1925, A. Dampf (LU). BIONOMICS: [Larvae probably in swamps, stream margins or other permanent ground waters]. Holotype collected in virgin forest.

3. Aedes (Ochlerotatus) pix Martini, 1935. TYPE: Lectotype ♀, Belize [Belize] [6-7 Sept 1925], A. Dampf (USNM; selection of Stone and Knight 1956a: 224). BIONOMICS: [Larvae probably in temporary ground pools].

List of Localities

BELIZE, Belize: 3. Aedes (O.) pix.

ORANGE WALK: 5 km south of Río Cacao; locality not shown on any map; stated to be in the interior of British Honduras; from dates of other collections made by Dampf and reported by Martini, Río Cacao would appear to be located near Blue Creek and La Boca on the way south to Yalbac and Cayo: 1. Uranotaenia bicolor; 2. Uranotaenia modesta.

COLOMBIA

List of Species

1. Anopheles (A.) bifoliata Osorno-Mesa & Muñoz-Sarmiento, 1948 [var. of pseudopunctipennis]. TYPE: Holotype ♂, larval skin and egg shell, Florida, near Cali (Valle), elev. 1006 m, Sept 1947, S. Renjifo-Salcedo (DMB). BIONOMICS: [Larvae probably in drying ground pools]. Holotype bred from female collected in building.

2. Anopheles (Kerteszia) bambusicolus Komp, 1937. TYPE: Lectotype ♀, La Unión (Meta), Sept 1935, J. Boshell-Manrique (USNM; selection of Stone

and Knight 1956b: 276). BIONOMICS: Larvae in unbroken bamboo internodes.

3. Anopheles (K.) homunculus Komp, 1937. TYPE: Lectotype ♂ with associated larval skin (3) and genitalia slide, Restrepo (Meta), 9 Sept 1935, W. H. Komp (USNM; selection of Stone and Knight 1956b: 278). BIONOMICS: Larvae in bromeliad leaf axils.

4. Anopheles (K.) anoplus Komp, 1937 [= homunculus]. TYPE: Holotype ♂ with associated larval skin and genitalia slide, Restrepo (Meta), Dec 1936, E. Osorno-Mesa (USNM). BIONOMICS: Larvae in bromeliad leaf axils.

5. Anopheles (Lophopodomys) oiketorakras Osorno-Mesa, 1947. TYPE: Lectotype ♂, Río San Francisco, in the canyon between Monserrate and Guadalupe Mts, elev. 2700-2840 m, east of Bogotá (Cundinamarca), 13 Mar 1946, E. Osorno-Mesa (USNM; selection of Stone and Knight 1956b: 279). BIONOMICS: Larvae in shaded "river holes" with organic debris and surrounded by vegetation.

*6. Anopheles (L.) squamifemur Antunes, 1937. TYPE: Holotype ♂, "vereda" Vega Grande, Restrepo (Meta), 29 Mar 1935, P. C. A. Antunes (IOC, 2298). BIONOMICS: [Larvae probably in shaded stream bed pools]. Adults captured at the border of the forest with animal bait, 1830-1930 hrs.

7. Trichoprosopon (Runchomyia) evansae Antunes in Lane and Cerqueira, 1942. TYPE: Holotype ♂, El Caibe, Restrepo (Meta), Dec 1934, P. C. A. Antunes (IOC). BIONOMICS: [Larvae probably in bamboo or treeholes, possibly predaceous].

8. Trichoprosopon (R.) lanei (Antunes, 1937). TYPE: Holotype ♂, Caney, Restrepo (Meta), 7 Feb 1935, P. C. A. Antunes (IOC, 2299). BIONOMICS: Pupa collected in bamboo joint in forest.

9. Wyeomyia (W.) camptocomma Dyar, 1924 [= scotinomus]. TYPE: Lectotype ♂ with genitalia slide (1903), Barranquilla (Magdalena), 1923, L. H. Dunn (USNM; selection of Stone and Knight 1957b: 121). BIONOMICS: Larvae in leaf axils of elephant's ear plants, Calladium (?).

10. Wyeomyia (Antunesmyia) colombiana Lane, 1945. TYPE: Holotype ♀, Vega Grande, Restrepo (Meta), Mar 1935, P. C. A. Antunes (FH, 4040). BIONOMICS: [Larvae probably in bromeliad leaf axils].

11. Psorophora (P.) cyanopennis (Humboldt, 1819) [= ciliata]. TYPE: Adult(s), Magdalena River close to Tenerife (Magdalena), date not specified, F. H. A. Humboldt (LU). BIONOMICS: [Predaceous larvae in temporary ground pools. Females diurnal biters].

12. Psorophora (P.) lineata (Humboldt, 1819). TYPE: Adult(s), Magdalena River (Magdalena), date not specified, F. H. A. Humboldt (LU). BIONOMICS: [Predaceous larvae in large temporary ground pools with grassy vegetation, possibly also in forested areas. Females are diurnal biters in the shade and may be attracted to lights].

13. Psorophora (Grabhamia) funiculus Dyar, 1920 [= confinnis]. TYPE: Lectotype ♂, Río Frío (Magdalena), 3-5 Mar 1913, J. H. Egbert (USNM; selection of Stone and Knight 1955: 284). BIONOMICS: [Larvae in open temporary ground pools of all types, especially hoofprints, road ruts and irrigation overflows. Females are diurnal and nocturnal biters and are attracted to lights].

14. Aedes (Ochlerotatus) euiris Dyar, 1922. TYPE: Lectotype ♀, Bogotá (Cundinamarca), 28 Feb 1922, F. A. Miller (USNM, 25763; selection of Stone and Knight 1957c: 201). BIONOMICS: [Larvae probably in rockholes, stream bed pools or other types of temporary ground pools].

15. Aedes (O.) milleri Dyar, 1922. TYPE: Holotype ♀, Bogotá (Cundinamarca), 28 Feb 1922, F. A. Miller (USNM, 25764). BIONOMICS: [Larvae

have been collected in shaded stream bed pools with organic debris and surrounded by vegetation, in association with Anopheles (S.) oiketorakras].

16. Aedes (Finlaya) scutellalbum Boshell-Manrique, 1939. TYPE: Holotype ♂, Río Upín, Restrepo (Meta), elev. 500 m, July 1938, J. Boshell-Manrique (USNM). BIONOMICS: Bred from larvae in rockpool in Río Upín.

17. Aedes (Soperia) pseudodominicii Komp, 1936 [= dominicii]. TYPE: Syntypes ♂, Restrepo (Meta), Aug-Sept 1935, E. Osorno-Mesa (NE). BIONOMICS: [Larvae probably in leaf axils of bromeliads]. Syntypes taken by netting.

18. Aedes (S.) whitmorei Dunn, 1918. TYPE: Lectotype ♀, near emerald mines, Muzo (Santander), 1916, E. R. Whitmore (USNM; selection of Stone and Knight 1956a: 226). BIONOMICS: [Larvae probably in bromeliads or treeholes not in "small heavily shaded pool of clear but apparently stagnant water" as stated by Dunn]. Adults captured in a hut occupied by mine guards.

19. Haemagogus (Stegoconops) andinus Osorno-Mesa, 1944. TYPE: Holotype ♂, coffee plantation near Fusagasugá (Cundinamarca), elev. 1746 m, May 1942, E. Osorno-Mesa (USNM). BIONOMICS: Larvae in rotholes in "guamos" trees (Inga sp.).

20. Haemagogus (S.) falco Kumm, Osorno-Mesa & Boshell-Manrique, 1946 [ssp. of capricornii or spegazzinii]. TYPE: Syntypes ♂, ♀, larvae, forest known as Volcanes in the valley of the Pitas River near Caparrapí (Cundinamarca), May and June 1943, H. W. Kumm, E. Osorno-Mesa and J. Boshell-Manrique (USNM; lectotype not selected, Stone and Knight 1955: 288). BIONOMICS: [Larvae in treeholes and bamboo traps].

21. Haemagogus (H.) boshelli Osorno-Mesa, 1944. TYPE: Holotype ♂ with genitalia slide, Bahía de Solano (Chocó), elev. 2-20 m, July 1942, E. Osorno-Mesa (USNM). BIONOMICS: Larvae in treeholes and coconut shells on the ground.

22. Culex (C.) aglischrus Dyar, 1924 [= maracayensis]. TYPE: Lectotype ♂ (1904, B 2) with genitalia slide (1904), Barranquilla (Magdalena), 1923, L. H. Dunn (USNM; selection of Stone and Knight 1957a: 42). BIONOMICS: Larvae in a hole in the ground and a deep hole resembling a shallow well.

23. Culex (C.) scutatus Rozeboom & Komp, 1948. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, Villavicencio (Meta), 15 May 1947, L. E. Rozeboom (USNM). BIONOMICS: Larvae in a small muddy footprint.

24. Culex (Melanoconion) batesi Rozeboom & Komp, 1948. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, Villavicencio (Meta), 15 May 1947, L. E. Rozeboom (USNM). BIONOMICS: Larvae in partly shaded, shallow margin of stream.

25. Culex (Mel.) meroneus Dyar, 1925 [= conspirator]. TYPE: Holotype ♂, Barranquilla (Magdalena), Nov-Dec 1924, L. H. Dunn (USNM). BIONOMICS: [Larvae probably in ground pools, stream margins or swamps].

26. Culex (Mel.) crybda Dyar, 1924. TYPE: Holotype ♂, on river steamer on the Atrato River at Murindó (Antioquia), date not specified, L. H. Dunn (USNM). BIONOMICS: [Larvae probably in stream margins, swamps or ground pools]. Holotype caught on river steamer between 2000 and 2200 hrs.

27. Culex (Mel.) mistura Komp & Rozeboom, 1951. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, Laguna de la Palmita, Villavicencio (Meta), 12 May 1947, L. E. Rozeboom (USNM). BIONOMICS: Larvae in grassy margin of an open, clear-water pond in pasture.

28. Culex (Mel.) sursumptor Dyar, 1924. TYPE: Lectotype ♂ (1909) with genitalia slide, Barranquilla (Magdalena), 1923, L. H. Dunn (USNM; selection

of Stone and Knight 1957a: 56). BIONOMICS: Larvae from a ground pool.

29. Culex (Mel.) ligator Dyar, 1924 [= sursumptor]. TYPE: Lectotype ♂ (1910) with genitalia slide, Barranquilla (Magdalena), 1923, L. H. Dunn (USNM; selection of Stone and Knight 1957a: 52). BIONOMICS: Larvae in a pool in a stream bed that was nearly dry.

30. Culex (Mochlostyrax) colombiensis Dyar, 1924 [= pilosus]. TYPE: Holotype ♂, on river steamer on the Atrato River at Murindó (Antioquia), date not specified, L. H. Dunn (USNM). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters]. Holotype caught on river steamer between 2000 and 2200 hrs.

31. Culex (Microculex) elongatus Rozeboom & Komp, 1950. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, Acacías (Meta), 3 June 1947, L. E. Rozeboom (USNM). BIONOMICS: Larvae from uncut bamboo internodes perforated with holes bored by insects; associated with Culex (Aedius) bamborum, Culex (Carrollia) wilsoni, Anopheles (Kerteszia) bambusicolus and Wyeomyia (W.) oblita. [Adults not collected in nature].

32. Culex (Eubonnea) paraplesia Dyar, 1922 [= amazonensis]. TYPE: Holotype ♂, Puerto Niño on Río Magdalena (Cundinamarca), 21 Feb 1922, F. A. Miller (USNM). BIONOMICS: [Larvae probably in ground pools with much vegetation. No information on adults].

33. Culex (Aedius) bamborum Rozeboom & Komp, 1948. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, Acacías (Meta), 3 June 1947, L. E. Rozeboom (USNM). BIONOMICS: Larvae from uncut bamboo internodes perforated by holes bored by insects. [Adults not collected in nature].

List of Localities

ANTIOQUIA

Río Atrato at Murindó: 26. Culex (Mel.) crybda; 30. Culex (Mel.) colombiensis.

CHOCO

Bahía de Solano: 21. Haemagogus (H.) boshelli.

CUNDINAMARCA

Bogotá: 14. Aedes (O.) euiris; 15. Aedes (O.) milleri.

Bogotá, Río San Francisco: 5. Anopheles (L.) oiketorakras.

Caparrapí, Río Pitas valley, Volcanes forest: 20. Haemagogus (S.) falco.

Fusagasugá: 19. Haemagogus (S.) andinus.

Puerto Niño on Río Magdalena: 32. Culex (E.) paraplesia.

MAGDALENA

Barranquilla: 9. Wyeomyia (W.) camptocomma; 22. Culex (C.) aglischrus; 25. Culex (Mel.) meroneus; 28. Culex (Mel.) sursumptor; 29. Culex (Mel.) ligator.

Frío (Río): 13. Psorophora (G.) funiculus.

Magdalena (Río): 12. Psorophora (P.) lineata.

Tenerife: 11. Psorophora (P.) cyanopennis.

META

Acacías: 31. Culex (Micr.) elongatus; 33. Culex (A.) bamborum.

La Unión: 2. Anopheles (K.) bambusicolus.

Restrepo: 3. Anopheles (K.) homunculus; 4. Anopheles (K.) anoplus;

6. Anopheles (L.) squamifemur (Vega Grande); 7. Trichoprosopon (R.) evansae (Caibe); 8. Trichoprosopon (R.) lanei (Caney); 10. Wyeomyia (A.) colombiana (Vega Grande); 16. Aedes (F.) scutellalbum (Río Upín); 17. Aedes (S.) pseudo-dominicii.

Villavicencio: 23. Culex (C.) scutatus; 24. Culex (Mel.) batesi; 27. Culex (Mel.) mistura (Laguna de la Palmita).

SANTANDER

Muzo, emerald mines: 18. Aedes (S.) whitmorei.

VALLE

Cali, Florida: 1. Anopheles (A.) bifoliata.

COSTA RICA

List of Species

1. Toxorhynchites (Lynchiella) moctezuma (Dyar & Knab, 1906) [= theobaldi]. TYPE: Holotype ♂ (3380), pathway to Las Loras, Río Aranjuez, near Puntarenas (Puntarenas), 13 Sept 1905, F. Knab (USNM, 9953; see Stone and Knight 1957c: 199). BIONOMICS: Predaceous larvae in coconut husks, [probably also in treeholes and artificial containers]. Adults resting on low herbage in a wooded area.

2. Trichoprosopon (Ctenogoeldia) homotina (Dyar & Knab, 1905) [= magnum]. TYPE: Holotype ♀, Puerto Limón (Limón), 28 Sept 1905, F. Knab (USNM, 9993; see Stone and Knight 1957b: 118). BIONOMICS: [Larvae in leaf axils and flower bracts of Marantaceae (Calathea)]. Adults taken in daytime flying in the forest.

3. Wyeomyia (W.) espartana Dyar & Knab, 1906 [= arthrostigma]. TYPE: Holotype ♀, Esparta (Puntarenas), 18 Sept 1905, F. Knab (USNM, 10005). BIONOMICS: [Larvae probably in broken bamboo or treeholes]. Holotype taken in deep, wooded ravine.

4. Wyeomyia (W.) gynaecopus Dyar & Knab, 1908 [= hemisagnosta]. TYPE: Holotype ♀, Esparta (Puntarenas), 18 Sept 1905, F. Knab (USNM, 11984). BIONOMICS: [Larvae probably in treeholes or coconut shells]. Holotype taken in deep, wooded ravine.

5. Wyeomyia (W.) adelpha Dyar & Knab, 1906 [= mittchellii]. TYPE: Lectotype ♀, Esparta (Puntarenas), 18 Sept 1905, F. Knab (USNM, 10000; selection of Stone and Knight 1957b: 120). BIONOMICS: [Larvae probably in leaf axils of bromeliads]. Adults of the type series were taken in a deep, shaded ravine, in the daytime, as they came to bite.

*6. Limatus methysticus Dyar & Knab, 1909 [= asulleptus]. TYPE: Lectotype ♂ with genitalia slide (368), Puerto Limón (Limón), 28 Sept 1905, F. Knab (USNM, 12131; selection of Stone and Knight 1957b: 117). BIONOMICS: [Larvae probably in broken bamboo, plant containers on the ground, artificial containers and possibly treeholes].

7. Uranotaenia orthodoxa Dyar, 1921. TYPE: Holotype ♀, Río Tiribí (San José), 29 May 1921, A. Alfaro (USNM, 24706). BIONOMICS: [Larvae probably in permanent ground waters].

8. Orthopodomyia fascipes (Coquillett, 1905). TYPE: Lectotype ♀ (338 b), pathway to Las Loras, Río Aranjuez, near Puntarenas (Puntarenas), 13 Sept 1905, F. Knab (USNM, 8296; selection of Stone and Knight 1957c: 198).

BIONOMICS: [Larvae probably in treeholes]. Adults collected in crevice in the trunk of a large tree.

9. Orthopodomyia kummi Edwards, 1939. TYPE: Holotype ♀, Orosi (Cartago), June 1937, H. W. Kumm (BM). BIONOMICS: Larvae in abandoned tank or cesspool full of clear rainwater; [also in treeholes].

10. Psorophora (P.) iracunda Dyar & Knab, 1906 [= cilipes]. TYPE: Holotype ♀ with associated larval and pupal skins, Las Loras near Puntarenas (Puntarenas), Sept 1905, F. Knab (USNM, 9965; see Stone and Knight 1955: 285). BIONOMICS: Larvae in a large pond choked by vegetation in the forest.

11. Aedes (Ochlerotatus) angustivittatus Dyar & Knab, 1907. TYPE: Holotype ♀, Puerto Limón (Limón), 28 Sept 1905, F. Knab (USNM, 10140; see Stone and Knight 1956a: 214). BIONOMICS: [Larvae in small temporary ground pools in full sunlight].

12. Aedes (O.) euplocamus Dyar & Knab, 1906. TYPE: No syntype larval material available at USNM, Zent (Limón), date not specified, F. Knab (NE; see Stone and Knight 1956a: 217). BIONOMICS: Larvae collected in a ditch.

13. Aedes (O.) meridionalis Dyar & Knab, 1906 [= serratus]. TYPE: Lectotype larval skin (333b) with associated pupal skin and ♂, Las Loras, near Puntarenas (Puntarenas), 8 Sept 1905, F. Knab (USNM; selection of Stone and Knight 1956a: 221). BIONOMICS: Larvae in a pond choked by vegetation which is dry in the dry season.

14. Aedes (Finlaya) homoeopus Dyar, 1922 [= argyrothorax]. TYPE: Lectotype ♂, Alajuela (Alajuela), Oct 1921, A. Alfaro (USNM; selection of Stone and Knight 1956a: 219). BIONOMICS: [Larvae probably in treeholes].

15. Aedes (F.) perichares Dyar, 1921 [= atropalpus]. TYPE: Lectotype ♀, Ciruelas (Alajuela), elev. 800 m, 29 Oct 1920, A. Alfaro (USNM, 23972; selection of Stone and Knight 1956a: 223). BIONOMICS: Larvae from rockholes.

16. Aedes (F.) heteropus Dyar, 1921 [= terrens]. TYPE: Lectotype ♂ with genitalia slide (1542), Alajuela (Alajuela), 1 July 1921, A. Alfaro (USNM, 24865; selection of Stone and Knight 1956a: 218). BIONOMICS: Larvae in bamboo joints.

17. Aedes (Howardina) allotecnon Kumm, Komp & Ruiz, 1940. TYPE: Lectotype ♂ (156) with associated larval skin, Poás Volcano (Alajuela), elev. 9000 ft, 14 Apr 1938, H. W. Kumm (USNM; selection of Stone and Knight 1956a: 214). BIONOMICS: Larvae in leaf axils of epiphytic bromeliads.

18. Haemagogus (Stegoconops) anastasionis Dyar, 1921. TYPE: Lectotype ♂ (1529) with genitalia slide, Puntarenas (Puntarenas), 15 July 1921, A. Alfaro (USNM, 24864; selection of Stone and Knight 1955: 287). BIONOMICS: [Larvae probably in treeholes in mangrove; also in artificial containers].

19. Haemagogus (S.) mesodentatus Komp & Kumm, 1938. TYPE: Holotype ♂, Parque Bolívar, San José (San José), 20 Dec 1937, H. W. Kumm (LU; see Stone and Knight 1955: 288). BIONOMICS: Larvae in treehole in park.

20. Haemagogus (H.) iridicolor Dyar, 1921. TYPE: Lectotype ♂ (1468) with genitalia slide, Higuito, San Mateo (Alajuela), 26 May 1921, P. Schild (USNM; selection of Komp 1955: 29, see also Stone and Knight 1955: 288). BIONOMICS: [Larvae in bamboo stubs].

21. Culex (C.) mortificator Dyar & Knab, 1906 [= nigripalpus]. TYPE: No syntype larval material available at USNM, Zent (Limón), 26 Sept 1905, F. Knab (NE; see Stone and Knight 1957a: 53). BIONOMICS: Larvae in hollow in stump of a banana containing a dark brown liquid.

22. Culex (Melanoconion) alfaroi Dyar, 1921 [= bastagarius]. TYPE: Holotype ♂ in bad condition, with genitalia slide, Atirro (Cartago), elev. 600 m,

24 Oct 1920, A. Alfaro (USNM, 23938). BIONOMICS: [Larvae probably in grassy margins of streams].

23. Culex (Mel.) holoneus Dyar, 1921 [= conspirator]. TYPE: Holotype ♂, Orotina (Alajuela), elev. 300 m, 17 Oct 1920, A. Alfaro (USNM, 23939). BIONOMICS: [Larvae probably in various types of permanent ground waters].

24. Culex (Mel.) pasadaemon Dyar, 1921 [= conspirator]. TYPE: Holotype ♂, San José (San José), 5 Jan 1921, A. Alfaro (USNM, 24083). BIONOMICS: [Larvae probably in various types of permanent ground waters].

25. Culex (Mel.) merodaemon Dyar, 1921 [= conspirator]. TYPE: Holotype ♂ with genitalia slide (1391), Orotina (Alajuela), 20 Dec 1920, A. Alfaro (USNM, 24082; see Stone and Knight 1957a: 53). BIONOMICS: [Larvae probably in various types of permanent ground waters].

26. Culex (Mel.) educator Dyar & Knab, 1906. TYPE: Syntype larvae (337) all in poor condition, Río Aranjuez near Puntarenas (Puntarenas), 12 Sept 1905, F. Knab (USNM; no lectotype selected by Stone and Knight 1957a: 48). BIONOMICS: Larvae in reeds at the edge of an old stream bed disconnected from the stream.

27. Culex (Mel.) elevator Dyar & Knab, 1906. TYPE: Lectotype larval skin with head capsule missing (355a) associated with pupal skin and adult female, 2 miles west of Puerto Limón (Limón), 30 Sept 1905, F. Knab (USNM; selection of Stone and Knight 1957a: 48). BIONOMICS: Larvae in a pool of clear spring water containing vegetable debris at the head of a small stream.

28. Culex (Mel.) limacifer Komp, 1936. TYPE: Holotype ♂ genitalia only (adult male lost), Chase (Limón), Feb 1928, W. H. W. Komp (USNM). BIONOMICS: [Larvae probably in various types of permanent ground pools].

*29. Culex (Mel.) trifidus Dyar, 1921. TYPE: Lectotype ♂ with genitalia slide (1436), Río Tiribí (San José), 7 Jan 1921, A. Alfaro (USNM; selection of Rozeboom and Komp 1950: 97; see Stone and Knight 1957a: 57). BIONOMICS: [Larvae probably in permanent ground waters].

*30. Culex (Aedius) latisquama (Coquillett, 1906). TYPE: Lectotype ♂ (344c), Puerto Limón (Limón), 25 Sept 1905, F. Knab (USNM, 8298; selection of Rozeboom and Komp 1950: 92; see Stone and Knight 1957a: 52). BIONOMICS: Larvae in crabholes along the seashore. Adults rest in the upper parts of the crabholes.

31. Culex (Carrollia) metempsychus Dyar, 1921. TYPE: Lectotype ♂, Alajuela (Alajuela), 4 July 1921, A. Alfaro (USNM, 24863; selection of Stone and Knight 1957a: 53). BIONOMICS: [Larvae probably in treeholes, bamboo or plant parts on the ground].

*32. Deinocerites epitedeus (Knab, 1907). TYPE: Lectotype ♂ (344a) with genitalia slide (286), Puerto Limón (Limón), 30 Sept 1905, F. Knab (USNM, 10291; selection of Stone and Knight 1957c: 197). BIONOMICS: Larvae in crabholes on side of a hill beyond the reach of tide water, the contained water being fresh, furnished by a small rivulet. The water surface was at a depth of several feet below the orifices of the holes. The adults rest in the upper parts of holes.

33. Dixella shannoni (Lane, 1942). TYPE: Holotype ♂, Higuito, San Mateo (Alajuela), date not specified, P. Schild (USNM). BIONOMICS: [Larvae probably in vegetation in stream margins or in other permanent ground waters].

List of Localities

ALAJUELA

Alajuela: 14. Aedes (F.) homoeopus; 16. Aedes (F.) heteropus; 31. Culex

(Carrol.) metempsychus.

Ciruelas: 15. Aedes (F.) perichares.

Higuito, San Mateo: 20. Haemagogus (H.) iridicolor; 33. Dixella shannoni.

Orotina: 23. Culex (Mel.) holoneus; 25. Culex (Mel.) merodaemon.

Poás Volcano, elev. 9000 ft: 17. Aedes (H.) allotecnon.

CARTAGO

Atirro: 22. Culex (Mel.) alfaroi.

Orosi: 9. Orthopodomyia kummi.

LIMON

Chase: 28. Culex (Mel.) limacifer.

Puerto Limón: 2. Trichoprosopon (C.) homotina; 6. Limatus methysticus; 11. Culex (O.) angustivittatus; 27. Culex (Mel.) elevator (2 m west); 30. Culex (A.) latisquama; 32. Deinocerites epitedeus.

Zent: 12. Aedes (O.) euplocamus; 21. Culex (C.) mortificator.

PUNTARENAS

Aranjuez (Río), near Puntarenas, pathway to Las Loras: 1. Toxorhynchites (L.) moctezuma; 8. Orthopodomyia fascipes; 26. Culex (Mel.) educator.

Esparta: 3. Wyeomyia (W.) espartana; 4. Wyeomyia (W.) gynaecopus; 5. Wyeomyia (W.) adelpha.

Las Loras (west of Aranjuez): 10. Psorophora (P.) iracunda; 13. Aedes (O.) meridionalis.

Puntarenas: 18. Haemagogus (S.) anastasionis.

SAN JOSE

San José: 19. Haemagogus (S.) mesodentatus (Parque Bolívar); 24. Culex (Mel.) pasadaemon.

Río Tiribí: 7. Uranotaenia orthodoxa; 29. Culex (Mel.) trifidus.

CUBA

List of Species

1. Anopheles (Nyssorhynchus) cubensis Agramonte, 1900 [= albimanus]. TYPE: ♂, ♀, several localities (LU). BIONOMICS: [Larvae in sunlit, permanent ground waters].

2. Wyeomyia (W.) minor Dyar & Knab, 1906 [= bahama]. TYPE: Holotype ♀, Baracoa (Oriente), Sept 1901, A. Busck (USNM, 9992; see Stone and Knight 1957b: 124). BIONOMICS: [Larvae probably in leaf axils of bromeliads].

3. Wyeomyia (W.) violescens Dyar & Knab, 1906 [= mittchellii]. TYPE: Holotype ♀, Cayamas (Oriente), 8 June 1906, E. A. Schwarz (USNM, 9991; see Stone and Knight 1957b: 126). BIONOMICS: [Larvae probably in leaf axils of bromeliads]. Holotype caught in home as it came to bite.

4. Wyeomyia (W.) argyrura Dyar & Knab, 1908 [= vanduzeei]. TYPE: Holotype ♀, San Antonio de los Baños (La Habana), date not specified, J. H. Pazos (USNM, 12009). BIONOMICS: [Larvae probably in leaf axils of bromeliads].

5. Wyeomyia (W.) conchita Dyar & Knab, 1909 [= vanduzeei]. TYPE: Lectotype ♀ (397), San Antonio de los Baños (La Habana), date not specified, J. H. Pazos (USNM, 12180; selection of Stone and Knight 1957b: 122). BIONOMICS: Larvae in leaf axils of Tillandsia.

6. Mansonia (Rhynchotaenia) persephassa (Dyar & Knab, 1909) [= nigricans]. TYPE: Holotype ♀, San Antonio de los Baños (La Habana), date not specified, J. H. Pazos (USNM, 12118). BIONOMICS: [Larvae probably on rootlets of sedges and grasses in mud in shallow water along edges of swamps or streams].

7. Uranotaenia oteizai Perez Vigueras, 1956. TYPE: ♂, ♀, Guanímar (La Habana), no data available (LU). BIONOMICS: [Larvae probably in permanent ground waters].

8. Psorophora (Janthinosoma) pazosi (Pazos, 1908) [= ferox]. TYPE: Holotype ♀, Vuelta Abajo (Las Villas), date not specified, J. H. Pazos (NE). BIONOMICS: [Larvae probably in temporary pools in wooded areas].

9. Psorophora (J.) schwarzi Dyar & Knab, 1907 [= johnstonii]. TYPE: Holotype ♀, Cayamas (Oriente), 7 May 1906, E. A. Schwarz (USNM, 9970). BIONOMICS: [Larvae probably in shaded temporary ground pools].

10. Aedes (Ochlerotatus) indolens Dyar & Knab, 1907 [= scapularis]. TYPE: Holotype ♀, Cayamas (Oriente), 8 May 1906, E. A. Schwarz (USNM, 10249; see Stone and Knight 1956a: 219). BIONOMICS: [Larvae probably in shaded temporary ground pools in wooded areas]. Holotype taken in woods.

11. Aedes (O.) bracteatus (Coquillett, 1906) [= tortilis]. TYPE: Holotype ♀, La Habana (La Habana), 1 Nov 1902, J. R. Taylor (USNM, 7753; see Stone and Knight 1956a: 215). BIONOMICS: [Larvae probably in various types of temporary ground pools].

12. Aedes (O.) habanicus Dyar & Knab, 1906 [= tortilis]. TYPE: Lectotype fragments of a larval skin on slide, La Habana (La Habana), 28 Oct 1903, J. R. Taylor (USNM; selection of Stone and Knight 1956a: 218). BIONOMICS: Associated with Psorophora (P.) larvae, [probably in various types of temporary ground pools].

13. Aedes (Stegomyia) mosquito (Robineau-Desvoidy, 1827) [= aegypti]. TYPE: ♂, "Habitat in ins. Cuba," probably La Habana, Poey (NE). BIONOMICS: [Larvae in domestic artificial containers].

14. Culex (C.) finlayi Perez Vigueras, 1956. TYPE: ♂, ♀, Casiguas, Barrio de Jaruco (La Habana), no data available (LU). BIONOMICS: [Larvae probably in permanent ground waters].

15. Culex (C.) prasinopleurus Martini, 1914 [= nigripalpus]. TYPE: Lectotype ♂, near Santiago de Cuba (Oriente), Nov 1913, E. Martini and J. M. Espini (BM; selection of Mattingly 1955: 31). BIONOMICS: [Larvae probably in crabholes]. Type series collected in crabholes.

16. Culex (C.) cubensis Bigot, 1856 [= pipiens quinquefasciatus]. TYPE: ♀, Cuba, from Guérin-Méneville collection (NE). BIONOMICS: [Larvae probably in foul ground pools or artificial containers].

17. Culex (Melanoconion) falsificator Dyar & Knab, 1909 [= atratus]. TYPE: Lectotype ♂ (408) with genitalia slide, La Habana (La Habana), 15 Feb 1904, J. R. Taylor (USNM, 12108; selection of Stone and Knight 1957a: 49-50). BIONOMICS: [Larvae probably in mangrove swamps].

18. Culex (Mel.) invocator Pazos, 1908 [= erraticus]. TYPE: Lectotype ♂ (337) with genitalia slide, San Antonio de los Baños (La Habana), J. H. Pazos (USNM, 12110; selection of Stone and Knight 1957a: 52). BIONOMICS: [Larvae probably in permanent fresh ground waters].

19. Culex (Mochlosytrax) cubensis (Dyar & Knab, 1906); agitator Dyar & Knab, 1907, new name [= pilosus]. TYPE: Syntype larvae, La Habana (La Habana), 1 Nov 1902, J. R. Taylor (USNM; see Stone and Knight 1957a: 46). BIONOMICS: [Larvae probably in permanent, semi-permanent or temporary

ground waters].

20. Culex (Mochl.) ignobilis Dyar & Knab, 1909 [= pilosus]. TYPE: Lectotype (648) with hindleg on slide (407), San Antonio de los Baños (La Habana), date not specified, J. H. Pazos (USNM, 12239; selection of Stone and Knight 1957a: 51). BIONOMICS: [Larvae probably in permanent, semi-permanent or temporary ground waters].

21. Culex (Mochl.) mastigia Howard, Dyar & Knab, 1913 [= pilosus]. TYPE: Lectotype ♂ (793) with genitalia slide (499), San Antonio de los Baños (La Habana), date not specified, J. H. Pazos (USNM, 12679; selection of Stone and Knight 1957a: 53). BIONOMICS: [Larvae probably in permanent, semi-permanent or temporary ground waters].

22. Culex (Aedinus) antillumagnorum Dyar, 1928 [= americanus]. TYPE: Lectotype ♂ (416) with genitalia slide (785), San Antonio de los Baños (La Habana), date not specified, J. H. Pazos (USNM, 40778; selection of Stone and Knight 1957a: 43). BIONOMICS: [Larvae probably in leaf axils of bromeliads].

23. Sayomyia antillum (Knab, 1913). TYPE: Holotype ♂, San Antonio de los Baños (La Habana), date not specified, J. H. Pazos (USNM, 16253). BIONOMICS: [Larvae probably in ponds, lakes or swamps].

List of Localities

CUBA (Locality not specified)

Probably in or near La Habana: 1. Anopheles (N.) cubensis; 13. Aedes (S.) mosquito; 16. Culex (C.) cubensis.

LA HABANA

Casiguas (Barrio de Jaruco): 14. Culex (C.) finlayi.

Guanímar: 7. Uranotaenia oteizai.

La Habana: 11. Aedes (O.) bracteatus; 12. Aedes (O.) habanicus; 17. Culex (Mel.) falsificator; 19. Culex (Mochl.) cubensis.

San Antonio de los Baños: 4. Wyeomyia (W.) argyrura; 5. Wyeomyia (W.) conchita; 6. Mansonia (R.) persephassa; 18. Culex (Mel.) invocator; 20. Culex (Mochl.) ignobilis; 21. Culex (Mochl.) mastigia; 22. Culex (A.) antillumagnorum; 23. Sayomyia antillum.

LAS VILLAS

Vuelta Abajo: 8. Psorophora (J.) pazosi.

ORIENTE

Baracoa: 2. Wyeomyia (W.) minor.

Cayamas: 3. Wyeomyia (W.) violescens; 9. Psorophora (J.) schwarzi; 10. Aedes (O.) indolescens.

Santiago de Cuba: 15. Culex (C.) prasinopleurus.

DOMINICA

List of Species

1. Wyeomyia (W.) abia Dyar & Knab, 1908 [= medioalbipes]. TYPE: Lectotype ♀ (4-2), Dominica, date not specified, F. E. Campbell (USNM, 11988; selection of Stone and Knight 1957b: 120). BIONOMICS: [Larvae probably in leaf axils of bromeliads].

2. Aedes (Howardina) busckii (Coquillett, 1906). TYPE: Lectotype ♂, cacao plantation, San Domingo [Dominica], 28 July 1905, A. Busck (USNM, 9139; selection of Stone and Knight 1956a: 215). BIONOMICS: Larvae in cacao pods (with vindicator).

3. Culex (C.) dictator Dyar & Knab, 1909 [= declarator]. TYPE: Lectotype ♂ (75.1) with larval skin and genitalia slide, Dominica, 28 July 1905, A. Busck (USNM, 12099; selection of Stone and Knight 1957a: 47). BIONOMICS: Larvae of type series collected in abandoned prospect hole, 30 ft deep, with clear sulphurous water (rockhole).

4. Culex (C.) vindicator Dyar & Knab, 1909 [= declarator]. TYPE: Lectotype ♂ (74.25) with larval and pupal skins and genitalia slide (776), Dominica, 28 July 1905, A. Busck (USNM, 12098; selection of Stone and Knight 1957a: 58). BIONOMICS: Larvae of type series collected in ill-smelling, thick water in cacao husks in a cacao plantation.

List of Localities

Type localities were not specified for any of the species.

DOMINICAN REPUBLIC

List of Species

1. Anopheles (Nyssorhynchus) albimanus Wiedemann, 1821. TYPE: ♀, Ins. St. Domingo, no other data (NMW). BIONOMICS: [Larvae in sunlit, permanent ground waters].

2. Toxorhynchites (Lynchiella) haitiensis (Dyar & Knab, 1906) [= portoricensis]. TYPE: Holotype ♀ (134.1), San Francisco Mts, Sept 1905, A. Busck (USNM, 9955; see Stone and Knight 1957c: 199). BIONOMICS: Type from larva in "hollow tree," others of type series from "hollow palm trunk" (123.1), hollow immortelle tree (139.1), hollow tree (144.1, 144.2).

3. Wyeomyia (W.) glaucocephala Dyar & Knab, 1906 [= mittchellii]. TYPE: Holotype ♀ (113, head missing), near Santo Domingo City, 17 Aug 1905, A. Busck (USNM, 9999; see Stone and Knight 1957b: 123). BIONOMICS: Larvae in epiphytic bromeliad and leaf axil of young palm.

4. Wyeomyia (W.) ochrura Dyar & Knab, 1906 [= mittchellii]. TYPE: Lectotype larval skin (113.1) with associated pupal skin, pinned ♂ and genitalia slide (364), near Santo Domingo City, 17 Aug 1905, A. Busck (USNM, 9987; selection of Stone and Knight 1957b: 124-125). BIONOMICS: Larvae in axils of young palm.

5. Wyeomyia (W.) sororcula Dyar & Knab, 1906 [= vanduzeei]. TYPE: Holotype ♀, San Francisco Mts, 29 Aug 1905, A. Busck (USNM, 9996; see Stone and Knight 1957b: 125). BIONOMICS: Larvae in epiphytic bromeliads.

6. Sabethes (S.) bipartipes Dyar & Knab, 1906. TYPE: Lectotype ♀, near Santo Domingo City, Aug 1905, A. Busck (USNM, 9980; selection of Stone and Knight 1957b: 117-118). BIONOMICS: [Larvae probably in treeholes or bamboo].

7. Psorophora (Grabhamia) infine (Dyar & Knab, 1906) [= cingulata]. TYPE: Lectotype ♂ (103.1) with associated larval and pupal skins and genitalia slide (192), near Santo Domingo City, Aug 1905, A. Busck (USNM; selection of Stone and Knight 1955: 285). BIONOMICS: Larvae in pothole near coast, water quite salty.

8. Psorophora (G.) insularia (Dyar & Knab, 1906). TYPE: Holotype ♀ (108.1) with associated larval and pupal skins, near Santo Domingo City, 11 July 1905, A. Busck (USNM, 9975; see Stone and Knight 1955: 285. BIONOMICS: Larvae in pools in coral limestone sprayed by high waves but not submerged except at extreme high tide.

9. Aedes (Ochlerotatus) balteatus Dyar & Knab, 1907 [= tortilis]. TYPE: Holotype ♀, near Santo Domingo City, Aug 1905, A. Busck (USNM, 10142; see Stone and Knight 1956a: 215). BIONOMICS: [Larvae probably in temporary ground pools].

*10. Aedes (Finlaya) mediovittatus (Coquillett, 1906). TYPE: Holotype ♀ (99.4) with associated larval and pupal skins, near Santo Domingo City, Aug 1905, A. Busck (USNM, 9138; see Stone and Knight 1956a: 221). BIONOMICS: Larvae in pothole in coral rock on road.

11. Aedes (Howardina) albonotatus (Coquillett, 1906). TYPE: Lectotype ♂ (141.3) with associated larval and pupal skins, San Francisco Mts, 3 Sept 1905, A. Busck (USNM, 8297; selection of Stone and Knight 1956a: 213). BIONOMICS: Larvae in bamboo stalk way out on mountain.

12. Culex (C.) duplicator Dyar & Knab, 1909. TYPE: Lectotype ♂, San Francisco Mts, Sept 1906, A. Busck (USNM, 12111; selection of Stone and Knight 1957a: 48). BIONOMICS: Larvae in pond in woods frequented by pigs.

*13. Culex (C.) habilitator Dyar & Knab, 1906. TYPE: Lectotype larval skin (102.2) with associated pupal skin, ♂ and genitalia slide (409), near Santo Domingo City, 10 Aug 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 50). BIONOMICS: Larvae in small pool in cave in coral cliffs near coast.

14. Culex (C.) eremita Howard, Dyar & Knab, 1913 [= habilitator]. TYPE: Lectotype ♂ (94.7) with genitalia slide (398), near Santo Domingo City, 8 Aug 1905, A. Busck (USNM, 12198; selection of Stone and Knight 1957a: 49). BIONOMICS: Larvae in deep freshwater crabhole near river.

15. Culex (C.) carmodyae Dyar & Knab, 1906 [= nigripalpus]. TYPE: Lectotype larval skin (151.2) with associated pupal skin and ♀, Samaná Bay, 28 Sept 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 45). BIONOMICS: Larvae in slow-running dirty watercourse across a road.

16. Culex (C.) regulator Dyar & Knab, 1906 [= nigripalpus]. TYPE: Lectotype larval skin (119.3) with associated pupal skin, male genitalia slide (423) and pinned ♂, near Santo Domingo City, 22 Aug 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 55). BIONOMICS: Larvae in an old bucket left in field.

17. Culex (C.) lamentator Dyar & Knab, 1906 [= secutor]. TYPE: Lectotype larval skin (124.1) with associated pupal skin and ♀, San Francisco Mts, 28 Aug 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 52). BIONOMICS: Larvae in hollow palm trunk.

18. Culex (Melanoconion) carcinophilus Dyar & Knab, 1906. TYPE: Lectotype larval skin (89.3) with associated pupal skin and ♂, south of Santo Domingo City, 7 Aug 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 45). BIONOMICS: Larvae in crabhole in lagoon along river; hole made and inhabited by crab but rather large and with water up to within one foot of ground surface.

19. Culex (Mel.) inhibitor Dyar & Knab, 1906. TYPE: Syntype larvae and fragmentary larval skin (135), San Francisco Mts, 3 Sept 1905, A. Busck (USNM; see Stone and Knight 1957a: 51). BIONOMICS: Larvae in a slowly running, clear cold spring.

List of Localities

SAMANA

Samaná Bay, probably near the port of Samaná: 15. Culex (C.) carmodyae.

SANTO DOMINGO

San Francisco Mts; no mountains by this name can be located on any map or in any gazeteer available to us; however, between collections at this locality A. Busck visited San Cristóbal (coll. 142) and there is a village of San Francisco in the mountains about 7 miles northwest of this city; therefore we believe that this material came from the mountains near the village of San Francisco and that it was variously mislabeled St. Francisco Mts, S. Francisco Mts and San Francisco Mts: 2. Toxorhynchites (L.) haitiensis; 5. Wyeomyia (W.) sororcula; 11. Aedes (H.) albonotatus; 12. Culex (C.) duplicator; 17. Culex (C.) lamentator; 19. Culex (Mel.) inhibitor.

Santo Domingo and vicinity: 1. Anopheles (N.) albimanus; 3. Wyeomyia (W.) glaucocephala; 4. Wyeomyia (W.) ochrura; 6. Sabethes (S.) bipartipes; 7. Psorophora (G.) infine; 8. Psorophora (G.) insularia; 9. Aedes (O.) balteatus; 10. Aedes (F.) mediovittatus; 13. Culex (C.) habilitator; 14. Culex (C.) eremita; 16. Culex (C.) regulator; 18. Culex (Mel.) carcinophilus.

ECUADOR

List of Species

1. Anopheles (A.) levicastilloi Leví-Castillo, 1944 [= ssp. of pseudopunctipennis]. TYPE: ♂ and eggs, Guayas Province, no other data (LU). BIONOMICS: [Larvae probably in various small, sunlit permanent and semi-permanent ground waters with algae].

2. Anopheles (A.) rivadeneirai Leví-Castillo, 1945 [= ssp. of pseudopunctipennis]. TYPE: Syntypes ♂, ♀, eggs, larvae and pupae, Interandian region (provinces of Azuay, Cañar, Carchi, Chimborazo, Cotopaxi, Imbabura, Loja, Pichincha, Tungurahua), no data on specific localities, dates or collectors (LU). BIONOMICS: [Larvae probably in various open permanent or semi-permanent ground waters].

3. Anopheles (Lophopodomyia) gomezelatorrei Leví-Castillo, 1955. TYPE: Holotype ♂ with associated larval and pupal skins, Hacienda Chiltazón (Carchi), elev. 2880 m, Oct 1954, V. H. Andrade (CEIE). BIONOMICS: Larvae in caves in páramo zone.

4. Trichoprosopon (T.) andinum Leví-Castillo, 1953. TYPE: Holotype ♂ with associated larval and pupal skins, ancient mines of Macuchi (Cotopaxi), elev. 1500 m, date not specified, R. Leví-Castillo (LU). BIONOMICS: Larvae in bamboo stumps filled with rainwater.

*5. Trichoprosopon (Vonplessenia) vonplesseni (Dyar & Knab, 1906). TYPE: Lectotype ♀, Upper Pastaza River (Napo-Pastaza), date not specified, Baron von Plessen (USNM, 9982; selection of Stone and Knight 1957b: 119). BIONOMICS: [Larvae probably in bamboo or leaf axils of Heliconia].

6. Trichoprosopon (Runchomyia) cotopaxensis Leví-Castillo, 1953. TYPE: Holotype ♂ with associated pupal skin, ancient mines of Macuchi (Cotopaxi), elev. 1500 m, date not specified, R. Leví-Castillo (LU). BIONOMICS: Pupae in bamboo stumps filled with rainwater.

7. Wyeomyia (W.) aequatorialis Leví-Castillo, 1952 [= aphobema]. TYPE: Holotype ♀, near Tena (Napo-Pastaza), date not specified, R. Leví-Castillo (CEIE). BIONOMICS: [Larvae probably in bromeliads]. Adults of type series collected resting on a tree near a clearing in virgin tropical jungle.
8. Wyeomyia aequatorianna Leví-Castillo, 1954. TYPE: Holotype ♂ with associated larval and pupal skins, Pichilingue (Los Ríos), date not specified, R. Leví-Castillo (CEIE). BIONOMICS: Larvae and pupae in leaf axils of "camachos" (Araceae).
9. Wyeomyia amazonica Leví-Castillo, 1954. TYPE: Holotype ♂, Tena (Napo-Pastaza), elev. 500 m, date not specified, R. Leví-Castillo (CEIE). BIONOMICS: [Larvae probably in bromeliads]. Holotype captured with a net in the forest.
10. Phoniomyia esmeraldas Leví-Castillo, 1955. TYPE: Holotype ♂ with genitalia slide, Changuaral Island, Bahía de Ancón de Sardinas (Esmeraldas), date not specified, R. Leví-Castillo (CEIE). BIONOMICS: [Larvae probably in bromeliads].
11. Limatus andinus Leví-Castillo, 1954. TYPE: Holotype ♂, Valencia (Los Ríos), 14 Oct 1953, R. Leví-Castillo (CEIE). BIONOMICS: [Larvae probably in bamboo, treeholes or plant parts on ground]. Holotype captured with a net in the forest.
12. Limatus guayasi Leví-Castillo, 1954. TYPE: Holotype ♂, El Empalme (Guayas), forest near intersection of the road Balzar to Empalme with road Quevedo to Manta, 2 km from road to the parish of Guayas, elev. 50 m, date not specified, R. Leví-Castillo (CEIE). BIONOMICS: [Larvae probably in bamboo, treeholes or plant parts on ground].
13. Sabethes (Sabethoides) chloropterus (Humboldt, 1819). TYPE: Adult(s), Guayaquil [Guayas] River near Borodon [Samborodon] (Guayas), no other data (LU). BIONOMICS: [Larvae probably in treeholes and bamboo internodes with small lateral opening; bamboo traps with small lateral hole should be used].
14. Uranotaenia aequatorianna Leví-Castillo, 1953. TYPE: 2 ♂, 1 ♀, Babahoyo (Los Ríos), no other data (CEIE). BIONOMICS: [Larvae probably in various permanent ground waters with vegetation].
15. Psorophora (Janthinosoma) ferox (Humboldt, 1819). TYPE: Adult(s), Borodon [Samborodon] (Guayas), no other data (LU). BIONOMICS: [Larvae probably in temporary rain pools in wooded areas].
- *16. Psorophora (Grabhamia) garciai (Leví-Castillo, 1953) [= cingulata]. TYPE: Holotype ♂, Dos Ríos, Región de Tena (Napo-Pastaza), no other data (CEIE). BIONOMICS: [Larvae probably in grassy sunlit temporary ground waters].
17. Aedes (Ochlerotatus) camposanus Dyar, 1918. TYPE: Lectotype ♂, Guayaquil (Guayas), date not specified, F. Campos Ribadeneira (USNM, 21916; selection of Stone and Knight 1956a: 216). BIONOMICS: [Larvae probably in temporary ground pools].
18. Aedes (Finlaya) metoecopus Dyar, 1925 [= terrens]. TYPE: Lectotype ♂ (2107186) with genitalia slide (2107), Ecuador, date not specified, F. Campos Ribadeneira (USNM; selection of Stone and Knight 1956a: 221). BIONOMICS: [Larvae probably in treeholes].
- *19. Haemagogus (Longipalpifer) panarchys Dyar, 1921. TYPE: Holotype ♂ (70) with most of abdomen mounted on slide (1466), El Salado, Guayaquil (Guayas), date not specified, F. Campos Ribadeneira (USNM, 24331; see Stone and Knight 1955: 288). BIONOMICS: [Larvae probably in treeholes or bamboo].
20. Haemagogus (Longipalpifer) soperi Leví-Castillo, 1955. TYPE: Holotype ♂ with associated larval and pupal skins, Juan Montalvo (Los Ríos), no

other data (CEIE). BIONOMICS: Larvae in bamboo stumps.

21. Haemagogus (H.) garciai Leví-Castillo, 1955. TYPE: Holotype ♂ with genitalia slide, Changuaral Island, Bahía de Ancón de Sardinas (Esmeraldas), no other data (CEIE). BIONOMICS: [Larvae probably in treeholes or bamboo].

22. Culex (C.) azuayus Leví-Castillo, 1954. TYPE: Holotype ♂ with associated larval and pupal skins, Zhurucuchu [Surucucho] (Azuay), elev. 3500 m, no other data (CEIE). BIONOMICS: Larvae in epiphytic bromeliads.

23. Culex (C.) camposi Dyar, 1925 [= ssp. of coronator]. TYPE: Holotype ♂, Ecuador, locality and other data not specified (USNM). BIONOMICS: [Larvae probably in all types of ground waters].

24. Culex (C.) guayasi Leví-Castillo, 1953. TYPE: ♀ and ♂ with genitalia slide (LR 5020), Babahoyo (Los Ríos), no other data (CEIE). BIONOMICS: [Larvae probably in permanent ground waters].

25. Culex (C.) levicastilloi Lane, 1945. TYPE: Holotype ♂ (4772), Ecuador, locality not specified, Mar 1944, R. Leví-Castillo (FH). BIONOMICS: [Larvae probably in permanent ground waters].

26. Culex (C.) quitensis Leví-Castillo, 1953. TYPE: 2 ♂, 1 ♀ with associated larval and pupal skins, near Quito (Pichincha), elev. 2900 m, no other data (CEIE). BIONOMICS: [Larvae probably in permanent ground waters].

27. Culex (Carrollia) babahoyensis Leví-Castillo, 1953. TYPE: Holotype ♂, Hacienda "Mora," Juan Montalvo (Los Ríos), no other data (USNM). BIONOMICS: Larvae in bamboo stumps.

28. Culex maculatus Humboldt, 1819. TYPE: Adult(s), near Babahoyo (Los Ríos), no other data (LU). -Nomen dubium.

List of Localities

AZUAY

Surucucho (as Zhurucuchu): 22. Culex (C.) azuayus.

CARCHI

Hacienda Chiltazón: 3. Anopheles (L.) gomezelatorrei.

COTOPAXI

Macuchi ancient mines: 4. Trichoprosopon (T.) andinum; 6. Trichoprosopon (R.) cotopaxensis.

ECUADOR

Interandian region (Azuay, Cañar, Carchi, Chimborazo, Cotopaxi, Imbabura, Loja, Pichincha, Tungurahua): 2. Anopheles (A.) rivadeneirai.

Locality not specified, probably near Guayaquil: 18. Aedes (F.) metoecopus; 23. Culex (C.) camposi; 25. Culex (C.) levicastilloi.

ESMERALDAS

Changuaral Island (Bahía de Ancón de Sardinas): 10. Phoniomyia esmeraldas; 21. Haemagogus (H.) garciai.

GUAYAS

El Empalme, intersection of road Balzar-Empalme with road Quevedo-Manta, 2 km from road to Guayas: 12. Limatus guayasi.

Guayaquil and vicinity: 17. Aedes (O.) camposanus; 19. Haemagogus (L.) panarchys (El Salado).

Locality not specified: 1. Anopheles (A.) levicastilloi.

Samborodon and vicinity (as Borodon): 13. Sabethes (Sabethoides) chloropterus (Guayas River); 15. Psorophora (J.) ferox.

LOS RIOS

Babahoyo and vicinity: 14. Uranotaenia aequatorianna; 24. Culex (C.) guayasi; 28. Culex maculatus.

Montalvo (Juan) and vicinity: 20. Haemagogus (L.) soperi; 27. Culex (Carrollia) babahoyensis (Hacienda "Mora").

Pichilingue: 8. Wyeomyia aequatorianna.

Valencia: 11. Limatus andinus.

NAPO-PASTAZA

Pastaza (Río), upper: 5. Trichoprosopon (Vonplessenia) vonplesseni.

Tena and vicinity: 7. Wyeomyia (W.) aequatorialis; 9. Wyeomyia amazonica; 16. Psorophora (G.) garciai.

PICHINCHA

Quito and vicinity: 26. Culex (C.) quitensis.

EL SALVADOR

List of Species

1. Wyeomyia (W.) megalodora Dyar & Knab, 1908 [= celaenocephala]. TYPE: Lectotype ♀, Sonsonate, 30 Aug 1905, F. Knab (USNM, 11993; selection of Stone and Knight 1957b: 124). BIONOMICS: [Larvae probably in bromeliads].

2. Wyeomyia (W.) mataea Dyar & Knab, 1908 [= celaenocephala]. TYPE: Lectotype ♀, Sonsonate, 19 Aug 1905, F. Knab (USNM, 11994; selection of Stone and Knight 1957b: 124). BIONOMICS: [Larvae probably in bromeliads].

3. Wyeomyia (W.) hemisagnosta Dyar & Knab, 1906. TYPE: Lectotype larval skin on slide (330 pi), Sonsonate, 30 Aug 1905, F. Knab (USNM, 9984; selection of Stone and Knight 1957b: 123). BIONOMICS: Larvae in coconut husks on a plantation just out of town.

4. Wyeomyia (W.) baria Dyar & Knab, 1908 [= hemisagnosta]. TYPE: Holotype ♀, Sonsonate, 30 Aug 1905, F. Knab (USNM, 11992). BIONOMICS: [Larvae probably in plant parts on ground and treeholes].

5. Wyeomyia (W.) ablechra Dyar & Knab, 1908 [= mittchellii]. TYPE: Lectotype ♀, Sonsonate, 16 Aug 1905, F. Knab (USNM, 11895; selection of Stone and Knight 1957b: 120). BIONOMICS: [Larvae probably in bromeliads].

*6. Wyeomyia (Dendromyia) aporonoma Dyar & Knab, 1906. TYPE: Lectotype larval skin (330 zd) with associated pupal skin and ♂, Sonsonate, 30 Aug 1905, F. Knab (USNM, 9983; selection of Stone and Knight 1957b: 121). BIONOMICS: Larvae in coconut husks.

7. Aedes (Finlaya) podographicus Dyar & Knab, 1906 [= terrens]. TYPE: Lectotype ♀ (325 j), Sonsonate, 18 Aug 1905, F. Knab (USNM, 10015; selection of Stone and Knight 1956a: 224). BIONOMICS: Larvae in treeholes.

8. Haemagogus (H.) regalis Dyar & Knab, 1906. TYPE: Holotype ♂ (330 v) with associated larval (fragment) and pupal skins and genitalia slide (36.I. 8b), Sonsonate, 30 Aug 1905, F. Knab (USNM, 10024; see Stone and Knight 1955: 289). BIONOMICS: Larvae in old coconut husks with foul water.

List of Localities

All species originally described from El Salvador were collected in Sonsonate and vicinity.

FRENCH GUIANA

List of Species

1. Anopheles (Stethomyia) canorii Floch & Abonnenc, 1945. TYPE: Holotype ♂, Saut-Canori, Haut-Approuague (Inini), 13 Feb 1944 (PIP, 704). BIONOMICS: [Larvae probably in shaded streams].

2. Anopheles (Nyssorhynchus) ininii Senevet & Abonnenc, 1938. TYPE: 2 ♀ (G 998) with associated larval and pupal skins and genitalia slides, St. Elie mines, Sinnamary River (Inini), 7 Feb 1938 (LPFM 998). BIONOMICS: Larvae in artificial impoundment.

3. Anopheles (N.) sanctielii Senevet & Abonnenc, 1938. TYPE: Holotype ♂ (G 999) with genitalia slide, St. Elie mines, Sinnamary River (Inini), 7 Feb 1938 (LPFM). BIONOMICS: Larvae in artificial impoundment.

*4. Toxorhynchites (Lynchiella) haemorrhoidalis (Fabricius, 1787). TYPE: Adult, "Cayennae Dom. v. Rohr" (NE). BIONOMICS: [Larvae probably in bromeliads].

5. Wyeomyia (W.) robusta Senevet & Abonnenc, 1939. TYPE: Holotype ♂ (G 927) with associated larval and pupal skins and genitalia slide, Saut-Tigre, Sinnamary River (Inini), 30 Nov 1937 (LPFM). BIONOMICS: Larva in epiphytic bromeliad (2.5 m).

6. Wyeomyia (Dendromyia) albocaerulea Senevet & Abonnenc, 1939 [= argenteorostris]. TYPE: ♀ and larvae, Saut-Tigre, Sinnamary River (Inini), Jan 1938 (PIA). BIONOMICS: Larvae in bromeliads.

7. Wyeomyia (D.) luciae Senevet, Chabelard & Abonnenc, 1942 [= chalconcephala]. TYPE: Holotype ♂ (M 1553) with associated larval and pupal skins and genitalia slide, Port-Inini, near Cayenne (Guyane), 18 Aug 1939 (LPFM). BIONOMICS: Larvae in axils of "balourous" (Heliconia).

8. Wyeomyia (D.) compta Senevet & Abonnenc, 1939. TYPE: Holotype ♀ (641-3), Saut-Tigre, Sinnamary River (Inini), 1 Jan 1938 (LPFM). BIONOMICS: Larvae in bromeliads.

9. Wyeomyia (D.) rorotai Senevet, Chabelard & Abonnenc, 1942 [= pseudopecten]. TYPE: ♂ (M 1543) with genitalia mount and ♀ (M 1544) with pupal skin and larva, heights of Rorota, Montagne du Mahury, near Cayenne (Guyane), 6 July 1939 (LPFM). BIONOMICS: Larvae in bromeliads.

10. Wyeomyia (D.) testei Senevet & Abonnenc, 1939. TYPE: Holotype ♂ (G 938, 5, 1) with associated larval and pupal skins and genitalia mount, Saut-Tigre, Sinnamary River (Inini), 13 Dec 1937 (LPFM). BIONOMICS: Larvae in epiphytic bromeliads.

11. Limatus martiali Senevet & Abonnenc, 1939. TYPE: Holotype ♂ (G 924, 5, 1) with genitalia mount, Saut-Tigre, Sinnamary River (Inini), 28 Nov 1937, (LU). BIONOMICS: Larvae in dried leaf filled with water.

12. Aedes (Ochlerotatus) martineti Senevet, 1937. TYPE: Holotype ♂ (G 113) with associated larval and pupal skins and genitalia mount, Pointe des Amandiers, Cayenne (Guyane), 1934, G. Senevet (LPFM). BIONOMICS: Larva in rockhole at seaside.

13. Aedes (Finlaya) draconarius Dyar, 1922 [= fluviatilis]. TYPE: Lectotype ♀, St. Laurent du Maroni (Guyane), 1909, E. Brimont (USNM, 25765; selection of Stone and Knight 1957c: 201). BIONOMICS: [Larvae probably in rockholes along rivers].

14. Culex (C.) rigidus Senevet & Abonnenc, 1939 [= corniger]. TYPE: Syn-types ♂ and ♀ (G 975) with associated larval and pupal skins and male genitalia

mount, Saut-Tigre, Sinnamary River (Inini), 20 Jan 1938 (LPFM). BIONOMICS: Larvae in hole for domestic wastes filled with rainwater.

15. *Culex* (C.) *pseudojanthinosoma* Senevet & Abonnenc, 1946. TYPE: Holotype ♀ (1553 M) with associated larval and pupal skins, locality not specified, 1939 (PIA). BIONOMICS: [Larvae probably in permanent or semi-permanent ground pools].

16. *Culex* (C.) *tisseuili* Senevet, 1937. TYPE: Holotype ♂ (G 116) with genitalia mount, Cayenne (Guyane), 3 Aug 1934, G. Senevet (LPFM). BIONOMICS: Larvae in a vessel filled with soapy water in the public hospital.

17. *Culex* (Melanoconion) *aurilatus* Senevet & Abonnenc, 1939 [= *chrysonotum*]. TYPE: Holotype ♂ (G 864) with associated larval and pupal skins and genitalia mount, locality and other data not specified (LPFM). BIONOMICS: [Larvae probably in permanent ground waters].

18. *Culex* (Mel.) *comatus* Senevet & Abonnenc, 1939. TYPE: Holotype ♂ (G 959) with associated larva and genitalia mount, Crique Mangué, Saut-Tigre, Sinnamary River (Inini), 20 Jan 1938 (LPFM). BIONOMICS: Larvae in flooded area around creek in the forest.

19. *Culex* (Mel.) *equinoxialis* Floch & Abonnenc, 1945. TYPE: Holotype ♂ (687) with genitalia mount, Camp Rochambeau, near Cayenne airport (Guyane), 29 May 1943 (PIG). BIONOMICS: [Larvae probably in permanent ground waters]. Adults captured in forest.

20. *Culex* (Mel.) *implicatus* Senevet & Abonnenc, 1939. TYPE: Holotype ♂ (G 899, 5) with associated larval and pupal skins and genitalia mount, Petit-Saut, Sinnamary River (Inini), 24 Oct 1937 (LPFM). BIONOMICS: Larvae in rockholes.

21. *Culex* (Mel.) *punctiscapularis* Floch & Abonnenc, 1946 [= *nigrimacula*]. TYPE: Holotype ♂ with genitalia mount, Crique Anguille, near Cayenne (Guyane), 18 June 1946 (PIG). BIONOMICS: [Larvae probably in bromeliads]. -This is probably not a *Melanoconion*.

22. *Culex* (Mel.) *patientiae* Floch & Fauran, 1955. TYPE: Holotype ♂ genitalia only (942), Patience, Haute-Mana (Inini), no other data (PIG). BIONOMICS: [Larvae probably in permanent ground waters].

23. *Culex* (Mel.) *vidali* Floch & Fauran, 1954 [= *phlogistus*]. TYPE: Holotype ♂ (941) with genitalia mount, near Moulin-de-Vidal, Ile de Cayenne (Guyane), no other data (PIG). BIONOMICS: [Larvae probably in permanent ground waters]. Adult captured in a burrow in undergrowth.

24. *Culex* (Mel.) *productus* Senevet & Abonnenc, 1939. TYPE: Holotype ♂ (G 997e) with associated larval skin and genitalia mount, Saint-Elie, Sinnamary River (Inini), 7 Feb 1938 (LPFM). BIONOMICS: Larvae in a watering-can containing a little water; [probably normally in ground waters].

25. *Culex* (Mel.) *cavernicolus* Floch & Abonnenc, 1945 [= *putumayensis*]. TYPE: Holotype ♂ (280) with genitalia mount, Cayenne (Guyane), 17 Jan 1940 (PIG). BIONOMICS: Larvae in burrows or excavations in the ground.

26. *Culex* (Mel.) *rabanicolus* Floch & Abonnenc, 1946. TYPE: Holotype ♂ (696), Chemin de Raban, Raban, near Cayenne (Guyane), 5 Aug 1943 (PIG). BIONOMICS: [Larvae probably in permanent ground waters].

27. *Culex* (Mel.) *rorotaensis* Floch & Abonnenc, 1946. TYPE: Holotype ♂ (655a), Rorota, Montagne du Mahury, near Cayenne (Guyane), no other data (PIG). BIONOMICS: [Larvae probably in permanent ground waters].

28. *Culex* (Mel.) *tournieri* Senevet & Abonnenc, 1939. TYPE: Holotype ♂ with associated larval skin (G 958b) and genitalia mount (G 958d), Crique Mangué, near Saut-Tigre, Sinnamary River (Inini), 20 Jan 1938 (LPFM). BIONOMICS: Larvae in flooded forest.

29. Culex (Mel.) trisetosus Fauran, 1961. TYPE: Holotype ♂ with genitalia mount, near St. Antoine at confluence of Oyac and Comté rivers (Guyane), 4 Feb 1957, P. Fauran (MNHP). BIONOMICS: [Larvae probably in permanent ground waters]. Holotype collected in undergrowth.

30. Culex (Mel.) portesi Senevet & Abonnenc, 1941 [= vomerifer]. TYPE: Holotype ♂ (61, 227 Ab2) with genitalia slide, locality not specified (LPFM). BIONOMICS: [Larvae probably in permanent ground waters].

31. Culex (Mel.) cayennensis Floch & Abonnenc, 1945 [= vomerifer]. TYPE: Holotype ♂ (286) with genitalia mount, Cayenne (Guyane), 17 Jan 1941 (PIG). BIONOMICS: [Larvae probably in permanent ground waters].

32. Culex (Mochlostyrax) radiatus Senevet & Abonnenc, 1939 [= pilosus]. TYPE: Holotype ♂ (G 971) with associated larval and pupal skins and genitalia mount, one of the following localities, Marais Leblond, Cayenne (Guyane), 6 Feb 1937; Crique Anguille (Guyane), 21 Aug 1937; Crique Mangue, Crique Plomb near Saut-Tigre, Sinnamary River (Inini), 22-29 Jan 1938 (LPFM). BIONOMICS: Larvae in swamps, streams, flooded ground.

33. Culex (Microculex) reginae Floch & Fauran, 1955. TYPE: Holotype ♂ genitalia (941), vicinity of Regina, Approuague River (Guyane), date not specified (PIG). BIONOMICS: [Larvae probably in bromeliads].

34. Culex (Aedinus) breviculus Senevet & Abonnenc, 1939. TYPE: Holotype ♂ (G 895) with genitalia mount, Saut-Tigre, Sinnamary River (Inini), 24 Oct 1937 (LPFM). BIONOMICS: [Larvae probably in ground waters, treeholes or bromeliads]. Holotype captured inside messhall.

35. Culex (Aedinus) cauchensis Floch & Abonnenc, 1945. TYPE: Holotype ♂ (685b) with genitalia mount, Caux or Kaw (Guyane), date not specified (PIG). BIONOMICS: Larvae in prospecting hole.

36. Culex (Carrollia) manaensis Floch & Fauran, 1955. TYPE: Holotype ♂ genitalia mount (909) with associated pupal skin, Boeuf-Mort (Massif Decon-Decon), Haute-Mana (Inini), date not specified (PIG). BIONOMICS: Pupa in bamboo internode.

See also the species listed under MIDDLE AMERICA.

Aedes (Ochlerotatus) mathisi (Neveu-Lemaire, 1902) [= serratus] and *Culex (Aedinus) americanus (Neveu-Lemaire, 1902) listed by Stone, Knight and Starcke from French Guiana are actually from BRAZIL since Counani [Cunani] is now included in Brazilian Guiana (Amapá).

List of Localities

FRENCH GUIANA

No locality specified: 15. Culex (C.) pseudojanthinosoma; 17. Culex (Mel.) aurilatus; 30. Culex (Mel.) portesi.

GUYANE

Camp Rochambeau (near Cayenne airport): 19. Culex (Mel.) equinoxialis.
Caux (or Kaw): 35. Culex (A.) cauchensis.

Cayenne: 4. Toxorhynchites (L.) haemorrhoidalis; 12. Aedes (O.) martine-ti (Pointe des Amandiers); 16. Culex (C.) tisseuli; 25. Culex (Mel.) caverni-colus; 31. Culex (Mel.) cayennensis; 32. Culex (Mochl.) radiatus (Marais Le-blond). See also species listed under MIDDLE AMERICA.

Crique Anguille: 21. Culex (Mel.) punctiscapularis; 32. Culex (Mochl.) radiatus.

Moulin-de-Vidal, Ile de Cayenne: 23. Culex (Mel.) vidali.

Port-Inini: 7. Wyeomyia (D.) luciae.

Raban, Chemin de Raban, near Montagne Tigre: 26. Culex (Mel.) rabanicolus.

Regina, Approuague River: 33. Culex (Micr.) reginae.

Rorota, Montagne du Mahury: 9. Wyeomyia (D.) rorotai; 27. Culex (Mel.) rorotaensis.

St. Antoine, confluence of Oyac and Comté rivers: 29. Culex (Mel.) trisetosus.

St. Laurent du Maroni: 13. Aedes (F.) draconarius.

ININI

Boeuf-Mort, Haute-Mana, Massif Decon-Decon: 36. Culex (Carrol.) manaensis.

Patience, Haute-Mana (upper part): 22. Culex (Mel.) patientiae.

Petit-Saut, Sinnamary River: 20. Culex (Mel.) implicatus.

St. Elie, Sinnamary River: 2. Anopheles (N.) ininii; 3. Anopheles (N.) sanctielii; 24. Culex (Mel.) productus.

Saut-Canori, Haut-Approuague: 1. Anopheles (S.) canorii.

Saut-Tigre, Sinnamary River: 5. Wyeomyia (W.) robusta; 6. Wyeomyia (D.) albocaerulea; 8. Wyeomyia (D.) compta; 10. Wyeomyia (D.) testei; 11. Lima-tus martiali; 14. Culex (C.) rigidus; 18. Culex (Mel.) comatus (Crique Mangue); 28. Culex (Mel.) tournieri (Crique Mangue); 32. Culex (Mel.) radiatus (Crique Mangue, Crique Plomb); 34. Culex (A.) breviculus.

GRENADA

List of Species

1. Anopheles (A.) pseudopunctipennis Theobald, 1901. TYPE: ♂, ♀, Grenada, Feb. Hatton (NE). BIONOMICS: [Larvae in ground pools and streams, usually clear water with algae].

*2. Wyeomyia (W.) grayii Theobald, 1901 [= pertinans]. TYPE: ♀, Ballast Ground (63), Feb 1900, W. E. Broadway; also from St. Lucia (BM). BIONOMICS: [Larvae probably in bromeliads].

3. Wyeomyia (Dendromyia) grenadensis Edwards, 1916 [= melanocephala]. TYPE: Holotype ♀, Grenada, A. Macdonald (BM). BIONOMICS: [Larvae probably in Heliconia or leaf axils of other plants].

4. Aedes (Howardina) thaxteri Dyar & Knab, 1919 [= busckii]. TYPE: Holotype ♀, Grand Etang, Nov 1912, R. Thaxter (USNM, 21704). BIONOMICS: Larvae in flower bracts of Heliconia.

5. Culex (C.) inflictus Theobald, 1901. TYPE: ♀, Grenada, Mar, W. E. Broadway (BM). BIONOMICS: [Larvae probably in crabholes].

6. Culex (C.) scholasticus Theobald, 1901 [= inflictus]. TYPE: ♂, ♀, Grenada (63), 14 Feb and Mar 1900, W. E. Broadway; also from St. Lucia and St. Vincent (BM). BIONOMICS: [Larvae probably in crabholes].

7. Culex (Melanoconion) jocasta Komp & Rozeboom, 1951. TYPE: Holotype ♂ genitalia, near Grenville, 4 July 1929, F. M. Root (USNM, 59873). BIONOMICS: Larvae in a small dirty pool in roadside ditch.

List of Localities

Ballast Ground: 2. Wyeomyia (W.) grayii.

Grand Etang: 4. Aedes (H.) thaxteri.

Grenville: 7. Culex (Mel.) jocasta.

No locality specified: 1. Anopheles (A.) pseudopunctipennis; 3. Wyeomyia (D.) grenadensis; 5. Culex (C.) inflictus; 6. Culex (C.) scholasticus.

GUADELOUPE

List of Species

1. Toxorhynchites (L.) guadeloupensis (Dyar & Knab, 1906). TYPE: Holotype ♀ (79.1), La Soufrière, elev. 3000 ft, 30 July 1905, A. Busck (USNM, 9956; see Stone and Knight 1957c: 199). BIONOMICS: Larvae in epiphytic bromeliad high up in tree.

2. Wyeomyia antillarum Floch & Abonnenc, 1945. TYPE: Syntypes, ♂ (63) Matouba, ♀ (56) St. Claude, both with associated larval and pupal skins, Nov 1944, M. Chassignet (PIG). BIONOMICS: Larvae in bromeliads.

3. Culex (Melanoconion) advieri Senevet, 1938 [= atratus]. TYPE: Holotype ♂ (G 534) with associated pupal skin and genitalia mount, Prise d'Eau, above water point, elev. 90 m, 27 Aug 1936, G. Senevet (LPFM). BIONOMICS: Larvae in a minute breeding site in association with Anopheles (A.) argyritarsis and Culex (Mel.) bonneti.

4. Culex (Mel.) bonneti Senevet, 1938 [= elevator]. TYPE: Holotype ♂ (G 556) with associated pupal skin and genitalia mount, Prise d'Eau, above water point, elev. 90 m, 27 Aug 1936, G. Senevet (LPFM). BIONOMICS: Larvae in a minute breeding site in association with Anopheles (A.) argyritarsis and Culex (Mel.) advieri.

*5. Culex (Aedius) bisulcatus (Coquillett, 1906) [= americanus]. TYPE: Lectotype ♂ (82.3) with associated larval and pupal skins and genitalia slide (1648), La Soufrière, elev. 3000 ft, 30 July 1905, A. Busck (USNM, 8291; selection of Stone and Knight 1957a: 44). BIONOMICS: Larvae in epiphytic bromeliads.

List of Localities

Matouba: 2. Wyeomyia antillarum.

Prise d'Eau: 3. Culex (Mel.) advieri; 4. Culex (Mel.) bonneti.

St. Claude: 2. Wyeomyia antillarum.

Soufrière, elev. 3000 ft: 1. Toxorhynchites (L.) guadeloupensis; 5. Culex (A.) bisulcatus.

GUATEMALA

List of Species

1. Anopheles (A.) apicimacula Dyar & Knab, 1906. TYPE: Holotype ♀, Livingston (Izabal), 11 May 1906, H. S. Barber (USNM, 9978; see Stone and Knight 1956b: 276). BIONOMICS: [Larvae in shaded ground pools, in pools formed by sluggish streams or in swamps].

2. Anopheles (A.) eiseni Coquillett, 1902. TYPE: Holotype ♀, Aguná (Escuintla), elev. 2000 ft, Gustav Eisen (USNM, 6699; see Stone and Knight 1956b:

277). BIONOMICS: [Larvae in shaded pools near streams, open treeholes and broken bamboo].

3. Anopheles (A.) hectoris Giaquinto, 1931. TYPE: ♂, ♀, larva, Guatemala (Guatemala) (A). BIONOMICS: Larvae in small, shallow, slow-flowing streams filled with algae.

4. Anopheles (A.) guatemalensis de León, 1938 [= var. of parapunctipennis]. TYPE: ♂, ♀, larva, pupa, Cumbre del Aire (Totonicapán), elev. 10000 ft, J. Romeo de León (ESPG). BIONOMICS: Larvae in cold springs.

5. Anopheles (A.) vestitipennis Dyar & Knab, 1906. TYPE: Lectotype ♀, Cacao, Trece Aguas (Alta Verapaz), 7-14 Apr 1906, E. A. Schwarz and H. S. Barber (USNM, 9976; selection of Stone in Russell, Rozeboom and Stone 1943: 34). BIONOMICS: [Larvae in cool shaded water in streams, pools and ponds; also in stagnant ditches filled with vegetation].

*6. Anopheles (A.) xelajuensis de León, 1938. TYPE: ♂, Cerro Quemado, Xelajú (Quezaltenango), J. Romeo de León (ESPG). BIONOMICS: [Larvae in treeholes].

7. Trichoprosopon (Shannoniana) moralesi (Dyar & Knab, 1919. TYPE: Lectotype ♀, San Felipe (Retalhuleu), Dr. Morales (USNM, 21997; selection of Stone and Knight 1957b: 118). BIONOMICS: [Larvae in leaf axils of "mafafa," Araceae?].

8. Wyeomyia (W.) celaenocephala Dyar & Knab, 1906. TYPE: Holotype ♀, Cacao, Trece Aguas (Alta Verapaz), 15 Apr 1906, E. A. Schwarz and H. S. Barber (USNM, 10006). BIONOMICS: [Larvae probably in terrestrial and/or epiphytic bromeliads].

9. Wyeomyia (W.) guatemala Dyar & Knab, 1906 [= mittchellii]. TYPE: Holotype ♀, Cacao, Trece Aguas (Alta Verapaz), 17 Apr 1906, E. A. Schwarz and H. S. Barber (USNM, 9994; see Stone and Knight 1957b: 123). BIONOMICS: [Larvae probably in epiphytic bromeliads].

10. Wyeomyia (Dendromyia) chalcocephala Dyar & Knab, 1906. TYPE: Holotype ♂ with genitalia slide (352), Cacao, Trece Aguas (Alta Verapaz), 1-17 Apr 1906, H. S. Barber (USNM, 1002; see Stone and Knight 1957b: 121-122). BIONOMICS: Larvae in flower bracts of Heliconia with upright flowers.

*11. Wyeomyia (D.) galoa Dyar & Knab, 1906 [= pseudopecten]. TYPE: Holotype ♀ (3), Cacao, Trece Aguas (Alta Verapaz), 15 Apr 1906, H. S. Barber (USNM, 10001; see Stone and Knight 1957b: 123). BIONOMICS: Larvae in flower bracts of Heliconia with upright flowers.

12. Psorophora (Janthinosoma) champerico (Dyar & Knab, 1906). TYPE: Holotype ♀, Champerico (Retalhuleu), 3 Aug 1905, F. Knab (USNM, 9968). BIONOMICS: [Larvae probably in temporary rainpools or creek overflows in wooded areas].

13. Aedes (Howardina) quadrivittatus (Coquillett, 1902). TYPE: Holotype ♀, Chaculá (Huehuetenango), elev. 6600 ft, 13 June 1902, Gustav Eisen (USNM, 6560; see Stone and Knight 1956a: 224). BIONOMICS: [Larvae probably in epiphytic bromeliads].

List of Localities

ALTA VERAPAZ

Cacao, Trece Aguas; probably Finca Secacao, north of La Tinta, along a tributary of the Río Polochic, a few miles west of Panzos: 5. Anopheles (A.) vestitipennis; 8. Wyeomyia (W.) celaenocephala; 9. Wyeomyia (W.) guatemala; 10. Wyeomyia (D.) chalcocephala; 11. Wyeomyia (D.) galoa.

ESCUINTLA

Aguná, elev. 2000 ft: 2. Anopheles (A.) eiseni.

GUATEMALA

Guatemala: 3. Anopheles (A.) hectoris.

HUEHUETENANGO

Chaculá, archeological site in Municipio Nentón: 13. Aedes (H.) quadrivittatus.

IZABAL

Livingston: 1. Anopheles (A.) apicimacula.

QUEZALTENANGO

Cerro Quemada, near Xelajú [Quezaltenango]: 6. Anopheles (A.) xelajensis.

RETALHULEU

Champerico: 12. Psorophora (J.) champerico.

San Felipe: 7. Trichoprosopon (Sh.) moralesi.

TOTONICAPAN

Cumbre del Aire, elev. 10000 ft; probably Cumbre Rosa del Aire in Municipio San Bartolomé: 4. Anopheles (A.) guatemalensis.

HAITI

List of Species

1. Limatus hoffmani Root, 1927. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, Rivière Froide (west of Port-au-Prince), 14 Oct 1924, W. A. Hoffman (USNM). BIONOMICS: [Larvae probably in tree-holes, fallen leaves or coconut shells]. Type collection made on a hillside.

2. Uranotaenia cooki Root, 1937. TYPE: Lectotype ♂ represented by a foreleg, portion of tarsus of another leg and genitalia, all mounted on a slide, Port-au-Prince, 11 Feb 1932, S. S. Cook (USNM, 50375; selection of Stone and Knight 1957c: 200). BIONOMICS: Larvae in small pools of quiet water on jutting ledges of rock in a ravine, shaded at all times and containing rotting leaves. Adults on under surface of rock ledges.

HONDURAS

List of Species

1. Culex (Melanoconion) intonsus Galindo & Blanton, 1954. TYPE: Holotype ♂ and genitalia mounted on same slide, Lancetilla Valley, Tela (Atlántida), 2 Oct 1953 (USNM). BIONOMICS: [Larvae probably in deep ground pools with much vegetation]. Holotype captured at light.

2. Culex (Mel.) opisthopus Komp, 1926. TYPE: Lectotype ♂ (2177) with genitalia slide, United Fruit Co. hospital, Puerto Castilla (Colón), Mar 1925, W. H. W. Komp (USNM; selection of Stone and Knight 1957a: 54). BIONOMICS: [Larvae probably in swamp north of hospital]. Adults taken in damp protected spot on the walls of an angle of the hospital.

JAMAICA

List of Species

- *1. Anopheles (A.) grabhamii Theobald, 1901. TYPE: Holotype ♀ (♂) mounted on slide (27), Kingston (St. Andrew), M. Grabham (BM). BIONOMICS: [Larvae in stagnant water, swamps, river bed and rockpools and pasture pools].
2. Anopheles (Nyssorhynchus) albipes Theobald, 1901; tarsimaculatus Goeldi, 1905, new name [= albimanus]. TYPE: ♂, ♀, locality not specified, 7 Dec 1899 and 8 Feb 1900, M. Grabham; also from Antigua, Brazil and British Guiana (BM). BIONOMICS: [Larvae in vegetation in sunlit permanent ground waters].
3. Wyeomyia (W.) hirsuta (Hill and Hill, 1946). TYPE: Holotype ♀, Hermitage Dam (St. Andrew), elev. 1500 ft, date not specified, R. B. Hill and C. McD. Hill (USNM). BIONOMICS: Larvae in epiphytic bromeliads.
4. Wyeomyia (W.) mitchellii (Theobald, 1905). TYPE: Holotype ♀, locality not specified, Jan 1904, M. Grabham (BM). BIONOMICS: [Larvae probably in epiphytic bromeliads, Tillandsia].
5. Uranotaenia socialis Theobald, 1901. TYPE: ♂, ♀ (11), Kingston (St. Andrew), Mar 1900, M. Grabham (BM). BIONOMICS: Larvae in stagnant permanent pools; [collected later at Rockfort, near Kingston in permanent pools].
6. Orthopodomyia waverleyi (Grabham, 1907) [= signifera]. TYPE: Adults, Waverley Estate, Constant Spring (St. Andrew), 1 Sept 1906, M. Grabham (NE). BIONOMICS: Larvae in thick coffee-like water in hollow mango trees.
7. Psorophora (Janthinosoma) echinata (Grabham, 1906) [= ferox]. TYPE: ♂, ♀, larva, about 5.75 m along Molyne's Road, near Kingston (St. Andrew), early Apr 1906, M. Grabham (NE). BIONOMICS: Larvae in a temporary pool in a logwood thicket.
8. Psorophora (J.) jamaicensis (Theobald, 1907) [= ferox]. TYPE: ♀, Runaway Bay (St. Ann), Lord Walsingham; Kingston (St. Andrew), M. Grabham; Apr and July (NE). BIONOMICS: [Larvae probably in temporary pools in wooded thickets].
9. Psorophora (J.) johnstonii (Grabham, 1905). TYPE: 4 ♀ syntypes, at foot of Red Hills, 5.5 miles along Molyne's Road, Kingston (St. Andrew), early July 1905, M. Grabham (NE). BIONOMICS: [Larvae probably in shaded temporary pools in wooded thickets]. Type series taken on a horse.
- *10. Psorophora (Grabhamia) jamaicensis (Theobald, 1901) [= confinnis]. TYPE: ♀, Spanish Town Road, Kingston (St. Andrew), 8 Feb 1900, M. Grabham (BM). BIONOMICS: [Larvae probably in open grassy temporary rainpools or irrigation overflows].
11. Psorophora (G.) walsinghamii (Theobald, 1907) [= confinnis]. TYPE: Holotype ♀, Runaway Bay (St. Ann), Apr, Lord Walsingham (BM). BIONOMICS: [Larvae probably in open grassy temporary rainpools or irrigation overflows].
12. Psorophora (G.) haruspicus (Dyar & Knab, 1908) [= insularia]. TYPE: Lectotype ♀, Port Antonio (Portland), 15 Nov 1906, M. Grabham (USNM, 11995; selection of Stone and Knight 1955: 284). BIONOMICS: Larvae in seaside pools in coral rock; [water probably saline and temporary].
13. Aedes (Ochlerotatus) hemisurus Dyar & Knab, 1906 [= scapularis]. TYPE: Larva, Río Cobre Canal Dam, near Spanish Town (St. Catherine), 17 Jan 1905, M. Grabham (NE; see Stone and Knight 1956a: 218). BIONOMICS: Larvae in temporary freshwater pools.
14. Aedes (O.) pertinax Grabham, 1906 [= serratus]. TYPE: Lectotype ♂ with genitalia slide (206), Kingston (St. Andrew), 10 Apr 1906, M. Grabham

(USNM; selection of Stone and Knight 1956a: 223). BIONOMICS: Larvae in temporary rainpools

15. *Aedes* (O.) *quasiserratus* (Theobald, 1907) [= *serratus*]. TYPE: ♀, Red Hills (St. Andrew), June and 10 July 1906, Lord Walsingham and M. Grabham; also Brazil (BM). BIONOMICS: [Larvae in temporary rainpools].

16. *Aedes* (O.) *tortilis* (Theobald, 1903). TYPE: ♀, Kingston (St. Andrew), Aug, M. Grabham (BM). BIONOMICS: [Larvae in temporary rainpools].

17. *Aedes* (O.) *auratus* Grabham, 1906 [= *tortilis*]. TYPE: ♂, ♀, larva, Kingston (St. Andrew), date not specified, M. Grabham (NE). BIONOMICS: Larvae in temporary rainpools.

18. *Aedes* (Finlaya) *uncatus* Grabham, 1907 [= *mediovittatus*]. TYPE: Lectotype ♂ with genitalia slide (210), Waverley Estate, Constant Spring (St. Andrew) or woods above Rockfort (Kingston), date not specified (USNM; selection of Stone and Knight 1956a: 226). BIONOMICS: [Larvae in treeholes].

19. *Aedes* (Howardina) *inaequalis* (Grabham, 1907). TYPE: Lectotype ♂ with genitalia slide, Kingston (St. Andrew), date not specified, M. Grabham (USNM; selection of Stone and Knight 1956a: 219). BIONOMICS: Larvae in hollow trees (chiefly *Anona palustris*) by the seashore.

20. *Aedes* (H.) *aureostriatus* (Grabham, 1906) [= *inaequalis*]. TYPE: ♂, ♀, pupa, larva, Newcastle (St. Andrew), elev. 4000 ft, summer and autumn 1905, Col. Loscombe and Miss Maclaverty (NE). BIONOMICS: Larvae in bromeliads.

21. *Aedes* (H.) *aurites* (Theobald, 1907) [= *inaequalis*]. TYPE: ♀, Newcastle (St. Andrew), elev. 4000 ft, July, Col. Loscombe (BM). BIONOMICS: [Larvae in bromeliads].

22. *Aedes* (H.) *stenei* Thompson, 1956. TYPE: Holotype ♂ (45090211) with associated larval skin and male genitalia slide, near Hope Farm, just above Porus, on road to Mandeville (Clarendon), elev. about 1000 ft, Sept 1945, G.A. Thompson (USNM). BIONOMICS: Larvae in epiphytic bromeliads. Females are fierce biters, especially in the shade of bromeliad-laden trees.

*23. *Aedes* (H.) *walkeri* (Theobald, 1901). TYPE: Holotype ♀, locality, date and collector not specified (BM). BIONOMICS: [Larvae in epiphytic bromeliads; very timid, hurrying to the bottom on the slightest provocation; collected at Mavis Bank (St. Andrew) at elev. of 5000 ft, M. Grabham].

24. *Haemagogus* (Longipalpifer) *equinus* Theobald, 1903. TYPE: Holotype ♀, lower end of Pound Road, Kingston (St. Andrew), 24 Aug, M. Grabham (BM). BIONOMICS: [Larvae in treeholes]. Type taken feeding on a horse.

25. *Culex* (C.) *hassardii* Grabham, 1906 [= *corniger*]. TYPE: ♂, ♀, larva, pupa, Newcastle (St. Andrew), elev. 4000 ft, Sept 1905, Maj. Hassard (NE). BIONOMICS: Larvae in a tank, [also in a water barrel].

26. *Culex* (C.) *subfuscus* Theobald, 1907 [= *corniger*]. TYPE: Holotype ♂, Moncague [Moneague] (St. Ann), Feb, Lord Walsingham (BM). BIONOMICS: [Larvae probably in rockholes, treeholes, ground pools or artificial containers].

27. *Culex* (C.) *janitor* Theobald, 1903. TYPE: ♂, ♀, Kingston, date not specified, M. Grabham (BM). BIONOMICS: [Larvae in crabholes]. Adults rest in crabholes along the seashore.

28. *Culex* (C.) *similis* Theobald, 1903 [= *nigripalpus*]. TYPE: Holotype ♀, Red Hills (St. Andrew), 2 Mar 1902, M. Grabham (NE ?). BIONOMICS: [Larvae probably in permanent ground waters or artificial containers].

29. *Culex* (C.) *microsquamosus* Theobald, 1905 [= *nigripalpus*]. TYPE: ♂, ♀, Río Cobre Canal Dam, near Spanish Town (St. Catherine), 17 Jan 1905, M. Grabham (BM). BIONOMICS: Larvae in algae-covered ground pools.

30. Culex (C.) revocator Dyar & Knab, 1909 [= pipiens quinquefasciatus]. TYPE: Lectotype ♂, Hope Gardens, Kingston (St. Andrew), date not specified, M. Grabham (USNM, 12100; selection of Stone and Knight 1957a: 55). BIONOMICS: [Larvae probably in ground pools contaminated with domestic wastes or in artificial containers].

31. Culex (C.) secutor Theobald, 1901. TYPE: ♂, ♀ (iii), Cinchona (St. Andrew), elev. 4900 ft, Harris (BM). BIONOMICS: Larvae in ground pools.

32. Culex (C.) quasisecutor Theobald, 1907 [= secutor]. TYPE: ♂, ♀, Newcastle (St. Andrew), elev. 4000 ft, M. Grabham (BM). BIONOMICS: Larvae in ground pools].

*33. Culex (Melanoconion) atratus Theobald, 1901. TYPE: ♂, ♀, Ferry swamp (St. Catherine), 7 Dec 1899, F. Cundall and 8 Feb 1900, M. Grabham; also Trinidad (BM). BIONOMICS: Larvae in permanent ponds in mangrove swamps.

34. Culex (Mel.) annulipes Theobald 1907 [= taeniopus]. TYPE: Holotype ♀, Red Hills (St. Andrew), date not specified, M. Grabham (BM). BIONOMICS: [Larvae probably in ground waters with high organic content; larvae presumably of this species have been collected in rockpools along the course of a stream and containing dead leaves and flower petals].

35. Culex (Mochlostyrax) jamaicensis (Grabham, 1906); reductor Dyar & Knab, 1909, new name [= pilosus]. TYPE ♂, ♀, larva, near Kingston (St. Andrew), date not specified, M. Grabham (NE). BIONOMICS: Larvae in permanent and temporary ground pools; rest on backs on bottom of pools.

*36. Deinocerites cancer Theobald, 1901. TYPE: Holotype ♀, Spanish Town Road, Kingston (St. Andrew), 8 Feb 1900, M. Grabham (BM; marked as type by Theobald, see Belkin and Hogue 1959: 432). BIONOMICS: Larvae in crab-holes.

37. Corethrella appendiculata Grabham, 1906. TYPE: ♂, ♀, larva, pupa, Kingston, May 1906, M. Grabham (USNM, 9960). BIONOMICS: Larvae in a treehole with thick brown water.

List of Localities

CLARENDON

Hope Farm, north of Porus: 22. Aedes (H.) stenei.

JAMAICA

Locality not specified, probably Kingston and vicinity (see): 2. Anopheles (N.) albipes; 4. Wyeomyia (W.) mitchellii.

PORTLAND

Port Antonio: 12. Psorophora (G.) haruspicus.

ST. ANDREW AND KINGSTON

Cinchona, elev. 4900 ft: 31. Culex (C.) secutor.

Constant Spring, Waverley Estate: 6. Orthopodomyia waverleyi; 18. Aedes (F.) uncatus.

Hermitage Dam: 3. Wyeomyia (W.) hirsuta.

Kingston and vicinity: 1. Anopheles (A.) grabhamii; 2. Anopheles (N.) albipes; 4. Wyeomyia (W.) mitchellii; 5. Uranotaenia socialis; 7. Psorophora (J.) echinata (5.75 m along Molyne Road); 10. Psorophora (G.) jamaicensis (Spanish Town Road); 14. Aedes (O.) pertinax; 16. Aedes (O.) tortilis; 17. Aedes (O.) auratus; 18. Aedes (F.) uncatus (woods above Rockfort); 19. Aedes (H.)

inaequalis; 24. Haemagogus (L.) equinus (Lower end of Pound Road); 27. Culex (C.) janitor; 30. Culex (C.) revocator (Hope Gardens, Royal Botanical Gardens); 35. Culex (Mochl.) jamaicensis; 36. Deinocerites cancer (Spanish Town Road); 37. Corethrella appendiculata.

Mavis Bank: 23. Aedes (H.) walkeri.

Newcastle, elev. 4000 ft: 20. Aedes (H.) aureostriatus; 21. Aedes (H.) aures; 25. Culex (C.) hassardii; 32. Culex (C.) quasisecutor.

Red Hills: 9. Psorophora (J.) johnstonii; 15. Aedes (O.) quasiserratus; 28. Culex (C.) similis; 34. Culex (Mel.) annulipes.

ST. ANN

Moneague: 26. Culex (C.) subfuscus.

Runaway Bay: 8. Psorophora (J.) jamaicensis; 11. Psorophora (G.) walsinghamii.

ST. CATHERINE

Ferry, Ferry Swamp: 33. Culex (Mel.) atratus.

Spanish Town, Río Cobre Canal Dam: 13. Aedes (O.) hemisurus; 23. Culex (C.) microsquamatus.

MARTINIQUE

List of Species

1. Wyeomyia (W.) colsoni Senevet & Quiévreux, 1941 [= var. of quasiluteoventralis]. TYPE: Adults and larvae (M 2136-M 2144), habitation Lameynadie, near Colson, 14 Aug 1939, G. Senevet and L. Quiévreux (LPFM). BIONOMICS: Larvae in epiphytic bromeliads.

2. Wyeomyia (W.) fratercula Dyar & Knab, 1906 [= vanduzeei]. TYPE: Holotype ♀, near Fort-de-France, 24 July 1905, A. Busck (USNM, 9995). BIONOMICS: Larvae in water in iron-work of an old mill.

3. Aedes (Soperia) tracei Senevet & Quiévreux, 1941. TYPE: Holotype ♂ (M 2163) with associated pupal skin and genitalia mount, near Piscine Colson, 14 Aug 1939, G. Senevet and L. Quiévreux (LPFM). BIONOMICS: Larvae in "feuilles de balisier" (Heliconia leaf axils?). This species is undoubtedly Aedes (Howardina) busckii (Coquillett, 1906), NEW SYNONYMY.

4. Aedes (Stegomyia) frater (Robineau-Desvoidy, 1827) [= aegypti]. TYPE: ♂, "habitat in insulis Americae"; probably from Martinique (Fort-de-France), see MIDDLE AMERICA (NE). BIONOMICS: [Larvae in artificial containers].

5. Culex (Melanoconion) madininensis Senevet, 1936. TYPE: Holotype ♂ (1204), Trinité, July 1934, G. Senevet (LPFM). BIONOMICS: [Larvae probably in ground waters].

List of Localities

Colson, route de Trace: 1. Wyeomyia (W.) colsoni (habitation Lameynadie); 3. Aedes (Sop.) tracei (near Piscine Colson).

Fort-de-France: 2. Wyeomyia (W.) fratercula; 4. Aedes (Steg.) frater.

Trinité: 5. Culex (Mel.) madininensis.

MEXICO

List of Species

1. *Anopheles* (A.) *aztecus* Hoffmann, 1935. TYPE: ♂, ♀, larva, egg, Valle de México (D. F.), elev. 2250 m, date not specified (UM). BIONOMICS: Larvae in canals, ditches, irrigation ditches or pools.
2. *Anopheles* (A.) *fausti* Vargas, 1943. TYPE: Holotype larva, Tamazunchale (San Luis Potosí), Apr or May, M. Macías (ISET). BIONOMICS: Larvae in treeholes.
3. *Anopheles* (A.) *gabaldoni* Vargas, 1941. TYPE: ♂, ♀, Tenosique (Tabasco), Apr-May 1941 (ISET). BIONOMICS: [Larvae in permanent ground waters].
4. *Anopheles* (A.) *cricillum* Martini, 1932 [= *hectoris*]. TYPE: ♀, vicinity of San Cristóbal de las Casas (Chiapas), elev. 2000 m, 30 June 1926, A. Dampf (LU). BIONOMICS: [Larvae probably in small permanent ponds].
5. *Anopheles* (A.) *parapunctipennis* Martini, 1932. TYPE: ♂, ♀, arroyo at base of Cerro de Milpa Alta, near San Cristóbal de las Casas (Chiapas), 13 July 1926, A. Dampf (LU). BIONOMICS: [Larvae in cold springs at high altitude].
6. *Anopheles* (A.) *willardi* Vargas, 1941 [= *pseudopunctipennis franciscanus*]. TYPE: ♂, ♀, larva, egg, Ciudad Juárez (Chihuahua) [the only locality cited in Stone, Knight and Starcke although 5 others given in original description], July-Aug 1941 (ISET). BIONOMICS: Larvae in sunlit streams and pools. Adults, males and females enter houses and stables.
7. *Anopheles* (A.) *strigimacula* Dyar & Knab, 1906 [= *punctimacula*]. TYPE: Holotype ♀, Córdoba (Veracruz), 13 June 1905, F. Knab (USNM, 9977). BIONOMICS: Larvae in pools in a river bed in a deep ravine; the water was clear and surrounded by large boulders [does not necessarily apply to holotype collection].
8. *Anopheles* (A.) *stonei* Vargas, 1941 [= *punctipennis*]. TYPE: ♂, ♀, Monterrey (Nuevo León), May 1941, G. Rosas (ISET and USNM; lectotype apparently not selected; USNM syntypes not cited by Stone and Knight 1956b). BIONOMICS: [Larvae probably along margins of deeply shaded streams and springs].
9. *Anopheles* (Nyssorhynchus) *bisignatus* Hoffmann, 1938 [= *albimanus*]. TYPE: Adults, González (Tamaulipas), Nov; Tampico (Tamaulipas) June, Oct, Nov, Dec, Jan; Altamira (Tamaulipas) June; El Mante (Tamaulipas) July; San Jerónimo, Laguna de Tamiahua (Veracruz), June, July (UM). BIONOMICS: [Larvae probably in vegetation in permanent sunlit ground waters].
10. *Anopheles* (N.) *trisignatus* Hoffmann, 1938 [= *albimanus*]. TYPE: Adults, region of Tampico (Tamaulipas), Dec, Jan (UM). BIONOMICS: [Larvae probably in vegetation in permanent sunlit ground waters].
11. *Toxorhynchites* (Lynchiella) *grandiosus* (Williston in Osten Sacken, 1900). TYPE: Holotype ♀, near Omilteme (Guerrero), elev. 8000 ft, date not specified, H. H. Smith (BM). BIONOMICS: [Larvae probably in treeholes].
12. *Toxorhynchites* (L.) *longipes* (Theobald, 1901) [= *grandiosus*]. TYPE: Holotype ♀, locality, date and collector not specified (BM). BIONOMICS: [Larvae probably in treeholes].
13. *Wyeomyia* (W.) *abebela* Dyar & Knab, 1908. TYPE: Lectotype ♂ (430.7) with associated pupal skin and genitalia both on slide (355), Córdoba (Veracruz), 17 Mar 1908, F. Knab (USNM, 11987; selection of Stone and Knight 1957b: 120). BIONOMICS: Larvae in bromeliads.

14. Wyeomyia (W.) ablabes Dyar & Knab, 1908 [= mittelli]. TYPE: Lectotype ♂ (421.103) with genitalia slide (302), Córdoba (Veracruz), Dec 1907, Jan and Mar 1908, F. Knab (USNM, 11986; selection of Stone and Knight 1957b: 120). BIONOMICS: Larvae in bromeliads.
15. Wyeomyia (W.) stonei Vargas & Martinez Palacios, 1953. TYPE: Holotype ♂ (6285-1), Poaná, Teapa, (Tabasco), 26 Mar 1946, M. Macías (ISET). BIONOMICS: [Larvae probably in bromeliads].
16. Sabethes (S.) ortizi Vargas & Díaz Nájera, 1961. TYPE: Holotype ♂ with genitalia slide (6465), Aldea El Naranjo, road to Ruins of Palenque (Chiapas), 26 Mar 1958, A. Díaz Nájera (ISET). BIONOMICS: [Larvae probably in treeholes with small lateral opening]. Holotype taken while attempting to bite (man or horse) in a thicket, humid and very shaded.
17. Uranotaenia coatzacoalcos Dyar & Knab, 1906. TYPE: Syntypes 2 larvae, in very poor condition, Santa Lucrecia [Jesús Carranza] (Veracruz), 20 June 1905, F. Knab (USNM; see Stone and Knight 1957c: 200). BIONOMICS: Larvae in ditch with reeds along railroad tracks.
18. Uranotaenia basalis Howard, Dyar & Knab, 1913 [= coatzacoalcos]. TYPE: Holotype ♂, Córdoba (Veracruz), 9 Jan 1908, F. Knab (USNM, 12259). BIONOMICS: Larva in pool among rocks in a stream bed.
19. Psorophora (Psorophora) virescens Dyar & Knab, 1906 [= howardii]. TYPE: Holotype ♀ (309 g), Almoloya (Oaxaca), 19 July 1905, F. Knab (USNM, 9966; see Stone and Knight 1955: 287). BIONOMICS: Larvae in temporary pools, usually of a muddy nature.
20. Psorophora (P.) simplex Martini, 1935 [= howardii]. TYPE: Lectotype ♀, Valle del Yaqui (Sonora), 18 Aug 1927, A. Dampf (BM; selection of Mattingly 1955: 28). BIONOMICS: [Larvae probably in open grassy temporary rainpools].
21. Psorophora (P.) stonei Vargas, 1956. TYPE: ♂, ♀, larva, Mazatlan (Sinaloa) (ISET). BIONOMICS: [Larvae probably in open grassy temporary pools].
22. Psorophora (Janthinosoma) pisces Lassmann, 1944 [= champerico]. TYPE: Lectotype ♂ genitalia slide, Tempoal (Veracruz), July 1944 (USNM; selection of Stone and Knight 1955: 285). BIONOMICS: [Larvae probably in temporary rain or floodwater pools in wooded areas].
23. Psorophora (J.) posticatus (Wiedemann, 1821) [= ferox]. TYPE: Holotype adult, locality and date not specified (NMW). BIONOMICS: [Larvae probably in temporary rainpools or in overflow pools along streams in wooded areas].
24. Psorophora (J.) mexicana (Bellardi, 1859). TYPE: ♀, locality and date not specified, Sallé (LU). BIONOMICS: [Larvae probably in temporary rainpools in wooded areas].
25. Psorophora (J.) totonaci Lassmann, 1951. TYPE: Holotype ♂, Cerro Guzman, Veracruz (Veracruz), 19 June 1946, G. Lassmann (USNM, 61293). BIONOMICS: Larvae in shaded rainpools.
26. Psorophora (J.) varipes (Coquillett, 1904). TYPE: Lectotype ♀, Las Peñas [Puerto Vallarta] (Jalisco), 18 July 1903, A. Dugés (USNM, 7341). BIONOMICS: [Larvae probably in temporary rain and floodwater pools in wooded areas].
27. Psorophora (Grabhamia) toltecum Dyar & Knab, 1906 [= confinnis]. TYPE: Holotype ♀ (286), Tehuantepec (Oaxaca), 29 June 1905, F. Knab (USNM, 9973; see Stone and Knight 1955: 286). BIONOMICS: Larvae in temporary ground pools of a variety of types.

28. Psorophora (G.) pruinosa Martini, 1935. TYPE: Lectotype ♀, Torreon (Coahuila), 6 June 1927, A. Dampf (BM; selection of Mattingly 1955: 28). BIONOMICS: [Larvae probably in temporary ground pools]. Adults attracted to light in cotton field.

29. Psorophora (G.) signipennis (Coquillett, 1904). TYPE: Lectotype ♀, Monterrey (Nuevo León), date not specified, J. Goldberger (USNM, 8029; selection of Stone and Knight 1955: 286). BIONOMICS: Larvae in temporary ground pools. Lectotype bred from larva.

30. Aedes (Ochlerotatus) argentescens Dyar & Knab, 1908 [= angustivittatus]. TYPE: Lectotype ♂ (441.4), Córdoba (Veracruz), 20 Jan or 8 Apr 1908, F. Knab (USNM, 11965; selection of Stone and Knight 1956a: 214). BIONOMICS: Larvae in temporary ground pools of a variety of types.

31. Aedes (O.) cuneatus Dyar & Knab, 1908 [= angustivittatus]. TYPE: Lectotype ♀ (422.19) with associated 2 larval and 1 pupal skins, Córdoba (Veracruz), 20 Jan 1908, F. Knab (USNM, 11964; selection of Stone and Knight 1956a: 216). BIONOMICS: Larvae in temporary puddles.

32. Aedes (O.) rozeboomi Vargas, 1941 [= bimaculatus]. TYPE: ♂, ♀, state of Campeche, date not specified (ISET). BIONOMICS: [Larvae probably in deep temporary rainpools open to the sun].

33. Aedes (O.) muelleri Dyar, 1920. TYPE: Lectotype ♂ with genitalia slide (1253), México (D. F.), date not specified, J. Müller (USNM, 22826; selection of Stone and Knight 1956a: 222). BIONOMICS: [Larvae probably in tree-holes].

*34. Aedes (O.) purpureipes Aitken, 1941. TYPE: Holotype ♀ (5155), Triunfo (Baja California Sur), 7 July 1938, A. E. Michelbacher and E. S. Ross (CAS). BIONOMICS: [Larvae in treeholes]. Holotype taken at night.

35. Aedes (O.) shannoni Vargas & Downs, 1950. TYPE: Holotype ♀ with associated larval and pupal skins, Gabriel Mariaca (Morelos), 10 June 1948, W. G. Downs (ISET). BIONOMICS: Larvae in a muddy pool in a stream bed of a running intermittent stream.

*36. Aedes (O.) taeniorhynchus (Wiedemann, 1821). TYPE: ♀, locality, date and collector not specified (NMW). BIONOMICS: [Larvae mostly in coastal salt marshes or freshwater pools near the sea. Females bite at all times of day].

37. Aedes (Finlaya) epactius Dyar & Knab, 1908 [= atropalpus]. TYPE: Lectotype ♀ (416.25), associated pupal skin missing, Córdoba (Veracruz), 18 Feb 1908, F. Knab (USNM, 11963; selection of Stone and Knight 1956a: 217). BIONOMICS: Larvae in holes or hollows in boulders in stream beds.

38. Aedes (F.) knabi (Coquillett, 1906). TYPE: Lectotype ♀ (291 A) with associated pupal skin, Tehuantepec (Oaxaca), 1 July 1905, F. Knab (USNM, 8289; selection of Stone and Knight 1956a: 220). BIONOMICS: Larvae in tree-holes.

39. Aedes (F.) kompi Vargas & Downs, 1950. TYPE: Holotype ♀, Tepoztlán (Morelos), 29 June 1947, W. G. Downs (ISET). BIONOMICS: Larvae in treeholes and rockholes.

40. Aedes (F.) ramirezi Vargas & Downs, 1950. TYPE: Holotype ♀, Gabriel Mariaca (Morelos), 29 June 1947, W. G. Downs (ISET). BIONOMICS: Larvae in rockholes.

41. Haemagogus (Longipalpifer) affirmatus (Dyar & Knab, 1906) [= equinus]. TYPE: Lectotype ♀, Salina Cruz (Oaxaca), 15 July 1905, F. Knab (USNM, 10023; selection of Dyar 1921: 103; see Stone and Knight 1955: 287). BIONOMICS: Larvae in treeholes.

42. Haemagogus (L.) philosophicus (Dyar & Knab, 1906) [= equinus]. TYPE: Lectotype larval skin (295b), Tehuantepec (Oaxaca), 1 July 1905, F. Knab (USNM; selection of Dyar 1921: 103; see Stone and Knight 1955: 288-289). BIONOMICS: Larvae in treeholes.

43. Haemagogus (Stegoconops) gorgasi Galindo & Trapido, 1956 [ssp. of mesodentatus]. TYPE: Holotype ♀ (01591) with associated larval and pupal skins, Tapachula (Chiapas), 4 Aug 1953 (GML). BIONOMICS: [Larvae in treeholes]. Holotype bred from egg of female biting man at above date.

44. Haemagogus (S.) alticola Galindo, Trapido & Boshell-Manrique in Galindo & Trapido 1956 [ssp. of mesodentatus]. TYPE: Holotype ♀ (01920) with associated larval and pupal skins, summit of Sumidero Canyon of the Río Grijalva, 24 km north of Tuxtla Gutierrez (Chiapas), elev. 4000 ft, 29 June 1953, (GML). BIONOMICS: [Larvae in treeholes]. Holotype bred from egg of female biting man at above date.

45. Culiseta (C.) dugesi Dyar & Knab, 1906 [= particeps]. TYPE: Lectotype ♀, Guanajuato (Guanajuato), 20 Jan 1905, A. Dugès (USNM, 9962; selection of Stone and Knight 1957c: 196). BIONOMICS: [Larvae probably in stream pools, overflows of streams, ponds and springs].

*46. Culex (Lutzia) bigoti Bellardi, 1862. TYPE: Holotype ♀, locality and date not specified, Sallé (BC). BIONOMICS: [Larvae in rockholes at stream margins, ground pools, artificial containers].

47. Culex (Neoculex) derivator Dyar & Knab, 1906. TYPE: Larva, Córdoba (Veracruz), 13 June 1905, F. Knab (NE; see Stone and Knight 1957a: 47). BIONOMICS: Larvae in pools in rocky stream beds.

48. Culex (Culex) lactator Dyar & Knab, 1906 [= corniger]. TYPE: Lectotype larval skin (270 i) with associated pupal skin, ♂ and genitalia slide (226), Rincón Antonio [Matías Romero] (Oaxaca), 23 June 1905, F. Knab (USNM; selection of Stone and Knight 1957a: 52). BIONOMICS: Larvae in puddles.

49. Culex (C.) mooseri Vargas & Martinez Palacios, 1954 [ssp. of coronator]. TYPE: Holotype ♂ (4022-1) with genitalia slide, Campeche (Campeche), June-July 1941, M. Macías Gómez (ISET). BIONOMICS: Larvae in rockpools. Holotype bred from larva.

50. Culex (C.) proclamator Dyar & Knab, 1906 [= declarator]. TYPE: Lectotype larval skin (262 p) with associated pupal skin and ♀, Santa Lucrecia [Jesús Carranza] (Veracruz), 19 June 1905, F. Knab (USNM; selection of Stone and Knight 1957a: 55). BIONOMICS: Larvae in shaded ground pools and in artificial container.

51. Culex (C.) federalis Dyar, 1923 [= erythrothorax]. TYPE: Lectotype ♂ with genitalia slide (1821), Xochimilco (D.F.), summer 1923, R. Balanzario (USNM; selection of Stone and Knight 1957a: 50). BIONOMICS: [Larvae probably in shallow ponds containing heavy growths of vegetation].

52. Culex (C.) interrogator Dyar & Knab, 1906. TYPE: Lectotype larval skin (270 y) with associated pupal skin and ♂, skins and genitalia on slide (231), Rincón Antonio [Matías Romero] (Oaxaca), 23 June 1905, F. Knab (USNM; selection of Stone and Knight 1957a: 51). BIONOMICS: Larvae in pool of very foul water among bones and rubbish.

53. Culex (C.) factor Dyar & Knab, 1906 [= nigripalpus]. TYPE: Lectotype larval skin (296 s) with pupal skin and ♂ genitalia both on slide (234), Tehuantepec (Oaxaca), 3 July 1905, F. Knab (USNM; selection of Stone and Knight 1957a: 49). BIONOMICS: Larvae in small puddles.

54. Culex (C.) eumimetes Dyar & Knab, 1908 [= peus]. TYPE: Lectotype ♂ (437.6), Orizaba (Veracruz), 16 Mar 1907, F. Knab (USNM, 11971; selection

of Stone and Knight 1957a: 49). BIONOMICS: Larvae in a puddle of drainage water in the suburbs of the city.

55. Culex (C.) pinarocampa Dyar & Knab, 1908. TYPE: Lectotype ♂, Río San Antonio, Córdoba (Veracruz), 31 Jan 1908, F. Knab (USNM, 11968; selection of Stone and Knight 1957a: 55). BIONOMICS: Larvae in holes in rocks along the river. Lectotype reared from pupa.

56. Culex (C.) penafieli Williston in Sanchez, 1886 [= pipiens quinquefasciatus]. TYPE: ♂, ♀, México (D. F.), date and collector not specified (LU). BIONOMICS: [Larvae probably in foul water of artificial containers, ditches and ground pools].

57. Culex (C.) dipseticus Dyar & Knab, 1909 [= pipiens pallens]. TYPE: ♂, Salina Cruz (Oaxaca), Acapulco (Guerrero), La Paz (Baja California Sur), dates and collectors not cited; also from Indio and Coachella, California, U. S. A. (USNM; not cited in Stone and Knight 1957a). BIONOMICS: [Larvae probably as for penafieli].

58. Culex (C.) stenolepis Dyar & Knab, 1908. TYPE: Lectotype ♂ (431.9) with genitalia slide (780), Córdoba (Veracruz), 17 or 21 Mar 1908, F. Knab (USNM, 11970; selection of Stone and Knight 1957a: 56). BIONOMICS: Larvae in epiphytic bromeliads, 20-50 ft from ground.

59. Culex (Melanoconion) conspirator Dyar & Knab, 1906. TYPE: Lectotype larval skin (312 f) with associated pupal skin and ♀, Almoloya (Oaxaca), 21 July 1905, F. Knab (USNM; selection of Stone and Knight 1957a: 46). BIONOMICS: Larvae in a large pothole beside a stream with clear water and dead leaves.

60. Culex (Mel.) gravitator Dyar & Knab, 1906. TYPE: Larvae (261), valley above Córdoba (Veracruz), 14 June 1905, 1907, F. Knab (NE; see Stone and Knight 1957a: 50). BIONOMICS: Larvae in bromeliads in a thicket.

61. Culex (Mel.) investigator Dyar & Knab, 1906 [= inhibitor]. TYPE: Larva (265), along railroad track 3 miles from Santa Lucrecia [Jesús Carranza] (Veracruz), 20 June 1905, F. Knab (USNM; material in collection of doubtful association and in poor condition, see Stone and Knight 1957a: 51). BIONOMICS: Larvae in reedy pool beside a railroad track.

62. Culex (Mel.) mutator Dyar & Knab, 1906. TYPE: Lectotype larval skin with associated pupal skin, ♂ (259 b) and genitalia slide, Córdoba (Veracruz), 11 June 1905, F. Knab (USNM; selection of Stone and Knight 1957a: 53). BIONOMICS: Larvae in rockpools of a stream bed.

63. Culex (Mochlostyrax) pilosus (Dyar & Knab, 1906). TYPE: Lectotype larval skin (267 b) with associated pupal skin and ♂, Santa Lucrecia [Jesús Carranza] (Veracruz), 21 June 1905, F. Knab (USNM; selection of Stone and Knight 1957a: 54). BIONOMICS: Larvae in holes made by horse's feet in mud at the margin of a swampy area of a river.

64. Culex (Microculex) rejector Dyar & Knab, 1906. TYPE: Larvae, Córdoba (Veracruz), 14 June 1905, F. Knab (NE; see Stone and Knight 1957a: 55). BIONOMICS: Larvae in a large bromeliad.

65. Culex (Micr.) restrictor Dyar & Knab, 1906. TYPE: Holotype larval skin (311 c) with associated whole pupa (♀) on slide, ravine at Almoloya (Oaxaca), 21 July 1905, F. Knab (USNM; see Stone and Knight 1957a: 55). BIONOMICS: Larva in small treehole.

66. Culex (Micr.) consternator Dyar & Knab, 1908 [= restrictor]. TYPE: Lectotype ♂ (429.1), Córdoba (Veracruz), 7 Mar 1908, F. Knab (USNM, 11969; selection of Stone and Knight 1957a: 46). BIONOMICS: Larvae in treehole.

67. Deinocerites howardi Belkin & Hogue, 1959. TYPE: Holotype ♂, Las Peñas [Puerto Vallarta] (Jalisco), 10 May 1903, A. Dugés (USNM, 64264). BIONOMICS: [Larvae in crabholes].

68. Deinocerites mcdonaldi Belkin & Hogue, 1959. TYPE: Holotype ♂ (119-116) with associated larval and pupal skins, near a road at Matanchen, near San Blas (Nayarit), 26 June 1956, W. A. McDonald (USNM, 64263). BIONOMICS: Larvae in crabholes, of 2-6 inches diameter, in a mangrove area.

69. Corethrella izquierdoi Vargas, 1952. TYPE: Holotype ♂ (6251), Tenosique (Tabasco), Apr 1941, L. Vargas (ISET). BIONOMICS: [Larvae probably in dense swamps or treeholes]. Holotype taken in light trap.

70. Corethrella laneana Vargas, 1946. TYPE: Holotype ♂ (3792), Monterrey (Nuevo León), June 1944, M. Macías (ISET). BIONOMICS: [Larvae probably in dense swamps].

71. Corethrella whartoni Vargas, 1952. TYPE: Holotype ♂ (6249), Comalcalco (Tabasco), Sept 1946, M. Macías (ISET). BIONOMICS: [Larvae probably in dense swamps or treeholes].

List of Localities

BAJA CALIFORNIA SUR

La Paz: 57. Culex (C.) dipseticus.

Triunfo: 34. Aedes (O.) purpureipes.

CAMPECHE

Campeche: 49. Culex (C.) mooseri.

Locality not specified: 32. Aedes (O.) rozeboomi.

CHIAPAS

El Naranjo, road to ruins of Palenque: 16. Sabethes (S.) ortizi.

San Cristóbal de las Casas: 4. Anopheles (A.) cricillium; 5. Anopheles (A.) parapunctipennis.

Sumidero Canyon, summit (elev. 4000 ft), Río Grijalva, 24 km north of Tuxtla Gutierrez: 44. Haemagogus (S.) alticola.

Tapachula: 43. Haemagogus (S.) gorgasi.

CHIHUAHUA

Ciudad Juarez: 6. Anopheles (A.) willardi.

COAHUILA

Torreón: 28. Psorophora (G.) pruinosa.

DISTRITO FEDERAL

México: 33. Aedes (O.) muelleri; 56. Culex (C.) penafieli.

Valle de México, elev. 2250 m: 1. Anopheles (A.) aztecus.

Xochimilco: 51. Culex (C.) federalis.

GUANAJUATO

Guanajuato: 45. Culiseta (C.) dugesi.

GUERRERO

Acapulco: 57. Culex (C.) dipseticus.

Omilteme, cattle ranch about 15-18 miles WNW of Chilpancingo (see Goldman, Smiths. Misc. Coll. 115: 152-153, 1951), elev. 8000 ft: 11. Toxorhynchites (L.) grandiosus.

JALISCO

Puerto Vallarta (formerly Las Peñas): 26. Psorophora (J.) varipes; 67. Deinocerites howardi.

MEXICO (Locality not specified)

All the species without specific localities were probably collected in the state of Veracruz, at or near either Veracruz or Coatzacoalcos (Puerto México): 12. Toxorhynchites (L.) longipes; 23. Psorophora (J.) posticatus; 24. Psorophora (J.) mexicana; 36. Aedes (O.) taeniorhynchus.

MORELOS

Gabriel Mariaca: 35. Aedes (O.) shannoni; 40. Aedes (F.) ramirezi.
Tepoztlán: 39. Aedes (F.) kompi.

NAYARIT

San Blas: 68. Deinocerites mcdonaldi.

NUEVO LEON

Monterrey: 8. Anopheles (A.) stonei; 29. Psorophora (G.) signipennis; 70. Corethrella laneana.

OAXACA

Almoloya: 19. Psorophora (P.) virescens; 59. Culex (Mel.) conspirator; 65. Culex (Micr.) restrictor.

Matías Romero (formerly Rincón Antonio): 48. Culex (C.) lactator; 52. Culex (C.) interrogator.

Salina Cruz: 41. Haemagogus (L.) affirmatus; 57. Culex (C.) dipseticus.

Tehuantepec: 27. Psorophora (G.) toltecum; 38. Aedes (F.) knabi; 42. Haemagogus (L.) philosophicus; 53. Culex (C.) factor.

SAN LUIS POTOSI

Tamazunchale: 2. Anopheles (A.) fausti.

SINALOA

Mazatlan: 21. Psorophora (P.) stonei.

SONORA

Valle del Yaqui: 20. Psorophora (P.) simplex.

TABASCO

Comalcalco, ca. 18° 15' 57" N, 93° 25' W: 71. Corethrella whartoni.

Poaná, Teapa: 15. Wyeomyia (W.) stonei.

Tenosique: 3. Anopheles (A.) gabaldoni; 69. Corethrella izquierdoi.

TAMAULIPAS

Altamira, Ciudad Mante [as El Mante], González: 9. Anopheles (N.) bisignatus.

Tampico: 9. Anopheles (N.) bisignatus; 10. Anopheles (N.) trisignatus.

VERACRUZ

Córdoba: 7. Anopheles (A.) strigimacula; 13. Wyeomyia (W.) abebela; 14. Wyeomyia (W.) ablaves; 18. Uranotaenia basalis; 30. Aedes (O.) argentescens; 31. Aedes (O.) cuneatus; 37. Aedes (F.) epactius; 46. Culex (L.) bigoti; 47. Culex (N.) derivator; 55. Culex (C.) pinarocampa (Río San Antonio); 58. Culex (C.) stenolepis; 60. Culex (Mel.) gravitator; 62. Culex (Mel.) mutator; 64. Culex (Micr.) rejector; 66. Culex (Micr.) consternator.

Guzman (Cerro), municipality of Veracruz: 25. Psorophora (J.) totonaci.

Jesús Carranza (formerly Santa Lucrecia): 17. Uranotaenia coatzacoalcos; 50. Culex (C.) proclamator; 61. Culex (Mel.) investigator; 63. Culex (Mochl.) pilosus.

Orizaba: 54. Culex (C.) eumimetes.

San Jerónimo, Laguna de Tamiahua: 9. Anopheles (N.) bisignatus.
 Tempoal: 22. Psorophora (J.) pisces.

MIDDLE AMERICA

List of Species

1. Trichoprosopon (Runchomyia) longipes (Fabricius, 1805). TYPE: Adult, "Habitat in America meridionali Dom. Smidt Mus. Dom. Lund" (ZMC). BIONOMICS: [Larvae probably in leaf axils and/or flower bracts of Araceae, Musaceae and bromeliads; possibly in treeholes].

2. Sabethes (S.) cyaneus (Fabricius, 1805). TYPE: Adult, "Habitat in America meridionali Dom. Smidt Mus. Dom. Lund" (ZMC). BIONOMICS: [Larvae in treeholes and bamboo with small lateral openings; bamboo traps of this type should be used].

3. Psorophora (P.) cilipes (Fabricius, 1805). TYPE: Adults, "Habitat in America meridionali Dom. Smidt Mus. Dom. de Sehestedt" (ZMC). BIONOMICS: [Larvae in temporary rainpools choked by vegetation in the forest].

4. Psorophora (Grabhamia) cingulata (Fabricius, 1805). TYPE: 2 adults, "Habitat in America meridionali Dom. Smidt Mus. Dom. de Sehestedt" (ZMC). BIONOMICS: [Larvae probably in open temporary rainpools].

5. Aedes (Stegomyia) fasciatus (Fabricius, 1805) [= aegypti]. TYPE: Adult, "Habitat in Americae Insulis Mus. Dom. Lund", probably from St. Croix, Virgin Islands (ZMC). BIONOMICS: [Larvae in domestic artificial containers].

6. Aedes (Stegomyia) frater (Robineau-Desvoidy, 1827) [= aegypti]. TYPE: ♂, "Habitat in insulis Americae", probably Martinique (NE). BIONOMICS: [Larvae in domestic artificial containers].

List of Localities

The country of origin of the above species is not definitely known. However, we have provisionally selected type localities for these species on the grounds indicated below.

FRENCH GUIANA

The 4 Fabrician species originating from "America meridionali" are stated to have come from Smidt. Ella Zimsen (The type material of I. C. Fabricius, Copenhagen, Munksgaard, 1964: 14) indicates that on old well-preserved original labels from the Sehestedt and Lund collections the name is spelled Schmidt and that in the 1780's a surgeon, Johan Christian Schmidt, and a customs-house officer, Adam Levin Smidt, both lived on St. Croix, then a Danish possession. On the basis of the evidence of the original labels we consider that the material came from the surgeon. The majority of the species involved do not occur on the island of St. Croix or in the Lesser Antilles and furthermore the locality "America meridionali" probably indicates the South American continent. The only contemporary Danish zoological expedition to this area appears to be that of Julius Rohr (Zimsen, loc. cit.) from the Danish West Indies. Some of the material collected by Rohr came from Cayenne, French Guiana, including Toxorhynchites (L.) haemarrhordalis described by Fabricius. It seems probable that some of the material collected on this expedition came into the hands of the surgeon, Johan C. Schmidt,

and eventually was deposited in the Sehestedt-Lund collections. As the only recorded specific locality of material from this expedition is that of Cayenne we chose this as the type locality of the following species: 1. Trichoprosopon (R.) longipes; 2. Sabethes (S.) cyaneus; 3. Psorophora (P.) cilipes; 4. Psorophora (G.) cingulata.

MARTINIQUE

Robineau-Desvoidy's material probably came from the French West Indies and we select Martinique as the type locality because this island was under French control during this period: 6. Aedes (S.) frater.

VIRGIN ISLANDS

The most likely source for the Fabrician material of the ubiquitous aegypti we consider to be the principal island of the Danish West Indies, St. Croix, where J. C. Schmidt resided (see French Guiana above): 5. Aedes (S.) fasciatus.

NICARAGUA

List of Species

1. Toxorhynchites (Lynchiella) hypoptes (Knab, 1907) [= theobaldi]. TYPE: Holotype ♂, Bluefields, W. F. Thornton (USNM, 10146). BIONOMICS: [Larvae probably in treeholes].

2. Trichoprosopon (Shannoniana) schedocyclium (Dyar & Knab, 1908). TYPE: Lectotype ♀, Bluefields, W. F. Thornton (USNM, 11974; selection of Stone and Knight 1957b: 119). BIONOMICS: [Larvae probably in leaf axils of Araceae, possibly in bamboo internodes]. Adults collected in "interior of Nicaragua" probably upriver from Bluefields.

3. Trichoprosopon (Runchomyia) leucopus (Dyar & Knab, 1906). TYPE: Lectotype ♀, Bluefields, W. F. Thornton (USNM, 10003; selection of Stone and Knight 1957b: 118). BIONOMICS: [Larvae probably in leaf axils of Araceae, Marantaceae and Musaceae].

4. Trichoprosopon (R.) ulopus (Dyar & Knab, 1906) [= longipes]. TYPE: Holotype ♀, Bluefields, W. F. Thornton (USNM, 10004). BIONOMICS: [Larvae probably in leaf axils and/or flower bracts of Araceae, Marantaceae and/or Musaceae].

5. Aedes (Finlaya) thorntoni Dyar & Knab, 1907 [= terrens]. TYPE: Holotype ♀, Bluefields, W. F. Thornton (USNM, 10143; see Stone and Knight 1956a: 225). BIONOMICS: [Larvae in treeholes and possibly broken bamboo].

6. Aedes (Howardina) septemstriatus Dyar & Knab, 1907. TYPE: Holotype ♀ (8), Bluefields, W. F. Thornton (USNM, 10144; see Stone and Knight 1956a: 225). BIONOMICS: [Larvae in treeholes].

7. Culex (Melanoconion) taeniopus Dyar & Knab, 1907. TYPE: Holotype ♀, Bluefields, W. F. Thornton (USNM, 10260). BIONOMICS: [Larvae probably in ground waters with high organic content; larvae presumably of this species have been collected in rockpools along the course of a stream and containing dead leaves and flower petals].

8. Deinocerites tetrastephus Dyar & Knab, 1909 [= cancer]. TYPE: Lectotype ♀ with genitalia slide (472), Bluefields, no other data (USNM, 12109; selection of Stone and Knight 1957c: 197). BIONOMICS: [Larvae in crabholes].

List of Localities

All the species originally described from Nicaragua are labeled Bluefields and were probably collected both on the coast and in interior upriver from Bluefields.

PANAMA AND CANAL ZONE

List of Species

1. Chagasia bathana (Dyar in Curry, 1928). TYPE: Holotype ♀, near Gatún (Canal Zone), 27 Dec 1927, C. H. Bath (USNM, 40859). BIONOMICS: Larvae and pupae among grass stems in narrow channels of swiftly flowing streams below rapids or falls, occasionally in quieter backwaters of the rapids or falls or in the sluggish streams below. [The larvae can be collected throughout the year but are most abundant during the rainy season (Arnett 1947: 187)]. Holotype bred from larva.
2. Anopheles (Stethomyia) kompi Edwards, 1930. TYPE: Holotype ♂, Almirante (Bocas del Toro), Feb 1928, W. H. W. Komp (USNM). BIONOMICS: [Larvae in very slow moving, drying streams or in pools left by drying streams in shady jungles. Apparently they are associated with an alga (Arnett 1947: 188)].
3. Anopheles (A.) niveopalpis Ludlow, 1919 [= eiseni]. TYPE: Holotype ♀, Camacho Reservoir, Empire (Canal Zone), 28 July 1928 (USNM). BIONOMICS: [Larvae in shaded pools beside streams and in woods, in open treeholes and broken bamboo, and in coconut husks].
4. Anopheles (A.) neomaculipalpus Curry, 1931. TYPE: ♂, ♀, larva and pupa, near Gatún (Canal Zone) and in the flat coastal savannas east of Panamá City (Panamá), no other data (LU). BIONOMICS: Larvae in cattle tracks exposed to the sun in low lying marshy pastures.
5. Anopheles (A.) chiriquiensis Komp, 1936 [= parapunctipennis]. TYPE: Lectotype ♂ with genitalia slide, Volcán de Chiriqui (Chiriqui), elev. 6500 ft, 7 Feb 1935, W. H. W. Komp (USNM, 51882; selection of Stone and Knight 1956b: 277). BIONOMICS: Larvae and pupae in cold spring among rocks (about 57 F). Adults in hollow trees and under stream banks.
6. Anopheles (A.) punctimacula Dyar & Knab, 1906. TYPE: Holotype adult, Colón (Colón), 2 Feb 1904, W. M. Black (USNM, 9979). BIONOMICS: [Larvae in swift or drying streams, ponds, ditches, rivers and seepage areas; abundant throughout the year. Adults in native houses during the day, abundant at screens at night, will bite man even during the day (Arnett 1947: 193)].
7. Anopheles (A.) malefactor Dyar & Knab, 1907 [= punctimacula]. TYPE: Lectotype ♀ (136.1) with associated larval skin (portion of abdomen) and pupal skin, upper Río Chagres (Panamá), 7 June 1907, A. Busck (USNM, 10877; selection of Stone and Knight 1956b: 278). BIONOMICS: Larvae in still pool of drying mountain spring.
8. Anopheles (Nyssorhynchus) gorgasi Dyar & Knab, 1907 [= albimanus]. TYPE: Holotype ♀, La Boca (Canal Zone), date not specified, A. H. Jennings (USNM, 10863). BIONOMICS: [Larvae in vegetation in open sunlit ground waters].
9. Anopheles (N.) anomalophyllus Komp, 1936. TYPE: Holotype ♂ with genitalia slide, Wenham's farm, near Almirante (Bocas del Toro), Feb 1927,

W. H. W. Komp (USNM). BIONOMICS: Pupae in a shaded running spring. Holotype bred from pupa.

10. Anopheles (N.) aquasalis Curry, 1932. TYPE: ♂ with genitalia slide, ♀ and larva, Atlantic side of Canal Zone (no type locality cited although Colón and Cristóbal are mentioned), date not specified, D. P. Curry et al (LU). BIONOMICS: Larvae in brackish water in areas where the tide has at least occasional access (tidal flats, coastal swamps), 3-66.8 per cent sea water, preferring shaded places.

11. Anopheles (N.) lloydi Unti, 1941 [var. of evansae]. TYPE: Holotype egg, Panamá, locality not specified (NE). BIONOMICS: [Larvae in small marshy areas with considerable vegetation, in marshy margins of clear freshwater pools, streams and lakes].

12. Anopheles (N.) aquacaelestis Curry, 1932 [= oswaldoi]. TYPE: ♂ with genitalia slide, ♀ and larva, Atlantic side of Canal Zone (no type locality is cited although Colón Hospital (20 June 1929) and lower Chagres River mentioned), D. P. Curry et al (LU). BIONOMICS: Larvae in fresh water pools "far above the reach of the tides, preferring shaded locations. Adult "not prone to seek out human habitations, or else its flight range is limited"; females "taken with sweep-net, and also in the act of attacking, in . . . densely shaded jungle swamps . . ."

13. Anopheles (Kerteszia) neivai Howard, Dyar & Knab, 1913. TYPE: Lectotype ♀ (344.1) with associated larval head capsule and pupal skin, Fort San Felipe, Portobelo Bay (Colón), 2 June 1908, A. H. Jennings (USNM, 20440; selection of Stone and Knight 1956b: 279). BIONOMICS: Larvae in epiphytic bromeliads. [Larvae in wild pineapple, Ananas magdalenae. Adults will bite humans (Komp 1937: 503, 523)].

14. Anopheles (K.) hylephilus Dyar & Knab, 1907 [= neivai]. TYPE: Lectotype ♀, Gatún (Canal Zone), Feb 1917, L. H. Dunn (USNM, 21065; by PRESENT SELECTION). BIONOMICS: [Larvae in bromeliads]. Adult taken in "quarters."

15. Trichoprosopon (T.) trichorryes (Dyar & Knab, 1907) [= compressum]. TYPE: Lectotype ♂ (30.2) with associated larval and pupal skins, near Tabernilla (Canal Zone), May 1907, A. Busck (USNM, 10847; selection of Stone 1944: 338). BIONOMICS: Eggs laid in prepared bamboo joint, 1 May, larvae and pupae developed, first adult issued 14 May. Adults approach to bite, but it is doubtful if they ever do so, or at least commonly. Lectotype reared from egg.

16. Trichoprosopon (T.) mogilasium (Dyar & Knab, 1907) [var. of compressum]. TYPE: Lectotype ♀ (45.1) with associated larval and pupal skins, Tabernilla (Canal Zone), May 1907, A. Busck (USNM, 10848; selection of Stone 1944: 338). BIONOMICS: Larvae in bamboo joints.

17. Trichoprosopon (T.) wilsoni Ludlow, 1918 [= digitatum]. TYPE: ♂ and larva, Chagres Camp, Las Cascadas (Canal Zone), 1 Dec, W. H. Wilson (LU). BIONOMICS: Larvae in coconut shell, predaceous on the "young" of other species or smaller members of their own species.

18. Trichoprosopon (Isostomyia) espini (Martini, 1914). TYPE: Holotype ♀, 3 different localities given: near Corozal, Miraflores Lake and Culebra (Canal Zone), Nov 1913, E. Martini (BMNH). BIONOMICS: [Larvae in leaf axils of aroid Monotrichardia arborescens on Atlantic side (Galindo, Carpenter and Trapido 1951: 129)].

19. Trichoprosopon (I.) shropshirei Ludlow, 1920 [= espini]. TYPE: Lectotype, Camp Gaillard (Canal Zone), 23 July 1919 (USNM, 27803; selection of Stone and Knight 1957b: 119, locality on label as Ancón). BIONOMICS: [Larvae probably as in espini above].

20. Trichoprosopon (Ctenogoeldia) dicellaphora (Howard, Dyar & Knab, 1913) [= magnum]. TYPE: Lectotype ♂ (476.3) with genitalia slide (1763), Miraflores (Canal Zone), 8 Feb 1909, A. H. Jennings (USNM, 12708; selection of Stone and Knight 1957b: 118). BIONOMICS: Larvae in flower bracts of marantaceous plant, Calathea discolor, presumably feeding on larvae of Wyeomyia.

21. Trichoprosopon (Runchomyia) lampropus (Howard, Dyar & Knab, 1913). TYPE: Lectotype ♂ with genitalia slide, Upper Pequení River (Panamá), 30 Mar 1909, A. H. Jennings (USNM, 12709; selection of Stone 1944: 34). BIONOMICS: Larvae in fallen palm spathe, predaceous, feeding upon larvae and pupae of T. digitatum.

22. Trichoprosopon (R.) culicivora (Dyar & Knab, 1907) [= longipes]. TYPE: Holotype ♀, Tabernilla (Canal Zone), 28 Apr 1907, A. Busck (USNM, 10849). BIONOMICS: Larvae in red flower bracts of Heliconia, predaceous on Wyeomyia galoa larvae. Holotype bred from larva.

23. Wyeomyia (W.) panamena Dyar & Knab, 1907 [= arthrostigma]. TYPE: Holotype ♀, Tabernilla (Canal Zone), 22 May 1907, A. Busck (USNM). BIONOMICS: Larvae in bamboo joints and "other similar locations." Holotype bred from pupa.

24. Wyeomyia (W.) chrysomus (Dyar & Knab, 1907) [= celaenocephala]. TYPE: Holotype ♂, native village near Tabernilla (Canal Zone), 25 June 1907, A. Busck (USNM, 10854). BIONOMICS: Larvae in epiphytic bromeliad. Holotype bred from larva.

25. Wyeomyia (W.) philophone (Dyar & Knab, 1907) [= celaenocephala]. TYPE: Holotype ♀, Tabernilla (Canal Zone), 25 Jan or 10 July 1907 (no indication in Stone and Knight 1957b: 125 of the correct date), A. Busck (USNM, 10852). BIONOMICS: Larvae in bromeliad Tillandsia. Holotype bred from larva.

26. Wyeomyia (W.) charmion Dyar, 1928. TYPE: Holotype ♂, near Gatún, at head of Stream No. 7, Agua Clara Reservoir (Canal Zone), Jan 1928, C. H. Bath (USNM, 41103). BIONOMICS: Larva in leaves of wild pineapple (Ananas magdalenae).

27. Wyeomyia (W.) codiocampa Dyar & Knab, 1907. TYPE: Lectotype ♂ (461) with genitalia slide (362), Tabernilla (Canal Zone), 9 May 1907, A. Busck (USNM, 10853; selection of Stone and Knight 1957b: 122). BIONOMICS: Larvae in bamboo joint, cut and prepared. Adults in bamboo woods "where they came to bite."

*28. Wyeomyia (W.) florestan Dyar, 1925. TYPE: Holotype ♂, Fort Clayton (Canal Zone), 17 Jan 1925, D. Baker (USNM). BIONOMICS: [One larva in treehole (Galindo, Carpenter and Trapido 1951: 130)].

29. Wyeomyia (W.) hosautos Dyar & Knab, 1907. TYPE: Holotype ♀, Tabernilla (Canal Zone), date not specified, A. Busck (USNM, 10860). BIONOMICS: Pupa in bamboo joint. Holotype bred from pupa.

*30. Wyeomyia (W.) symmachus Dyar & Knab, 1909 [= hosautos]. TYPE: Lectotype ♀ (326), Tabernilla (Canal Zone), 23 May 1908, A. H. Jennings (USNM, 12056; selection of Stone and Knight 1957b: 125). BIONOMICS: Larvae in bamboo joints. Lectotype bred from larva.

31. Wyeomyia (W.) euethes Dyar & Knab, 1909 [= hosautos]. TYPE: Holotype ♀, Tabernilla (Canal Zone), 10 May 1906, A. Busck (USNM, 12134). BIONOMICS: Larvae in bamboo joints. Holotype bred from larva.

32. Wyeomyia (W.) melanopus Dyar, 1919. TYPE: Holotype ♂ (119), Portobelo (Colón), 2 Jan 1908, A. H. Jennings (USNM, 22005). BIONOMICS: Larva in bromeliad on a fallen tree. Holotype bred from larva.

33. Wyeomyia (W.) culebrae Dyar, 1923 [= melanopus]. TYPE: Holotype ♀, Culebra (Canal Zone), 1918, L. H. Dunn (USNM). BIONOMICS: [Larvae probably in bromeliads].

34. Wyeomyia (W.) rolonca Dyar & Knab, 1910 [= mittchellii]. TYPE: Holotype ♂, Upper Pequení River, 2 miles up the Río Juanita (Panamá), 24 Mar 1909, A. H. Jennings (USNM, 12745). BIONOMICS: Larva in epiphytic bromeliad. Holotype bred from larva.

35. Wyeomyia (W.) labesba Howard, Dyar & Knab, 1913 [= mittchellii]. TYPE: Lectotype larval skin (471.1) with associated ♀ (471), Tabernilla (Canal Zone), 4 Feb 1909, A. H. Jennings (USNM, 12702; selection of Stone and Knight 1957b: 124). BIONOMICS: Larvae in "wild pineapple plants" along edge of swampy pasture.

36. Wyeomyia (W.) nigritubus Galindo, Carpenter & Trapido, 1951. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, La Victoria, Cerro Azul (Panamá), elev. 2100 ft, 27 Apr 1950 (USNM). BIONOMICS: Larvae in bamboo internode trap 5 ft above forest floor.

37. Wyeomyia (W.) scotinomus (Dyar & Knab, 1907). TYPE: Lectotype ♂ (103.1) with associated larval head and pupal skin and genitalia slide (438), Boquerón River (Panamá), 23 May 1907, A. Busck (USNM, 10855; selection of Stone and Knight 1957b: 125). BIONOMICS: Larvae in epiphytic bromeliad Tillandsia.

38. Wyeomyia (W.) homothe Dyar & Knab, 1907 [= scotinomus]. TYPE: Holotype ♀, near Tabernilla (Canal Zone), date not specified, A. Busck (USNM, 10859). BIONOMICS: [Larvae probably in bromeliad Tillandsia]. The adults were collected in bamboo woods in the act of biting.

39. Wyeomyia (W.) leucopisthepus Dyar & Knab, 1907 [= scotinomus]. TYPE: Holotype ♂, associated larval and pupal skin not preserved, near Tabernilla (Canal Zone), 10 July 1907, A. Busck (USNM, 10861). BIONOMICS: Larvae in epiphytic bromeliad Tillandsia.

40. Wyeomyia (W.) abrachys Dyar & Knab, 1909 [= scotinomus]. TYPE: Lectotype ♂ (119.3) with associated larval skin and genitalia slide (436), Caldera Island, Portobelo Bay (Colón), 2 Jan 1908, A. H. Jennings (USNM, 12133; selection of Stone and Knight 1957b: 120). BIONOMICS: Larvae in epiphytic bromeliad on fallen tree.

41. Wyeomyia (W.) chresta Dyar & Knab, 1909 [= scotinomus]. TYPE: Lectotype ♂ (216.3) with associated larval head capsule and genitalia slide (439), Tabernilla (Canal Zone), 22 July 1907, A. Busck (USNM, 12135; selection of Stone and Knight 1957b: 122). BIONOMICS: "Bred from [bromeliad] Tillandsia on a calabash tree near the railroad station in Tabernilla."

42. Wyeomyia (W.) hapla Dyar & Knab, 1909 [= scotinomus]. TYPE: Holotype ♀, Caldera Island, Portobelo Bay (Colón), 4 Jan 1908, A. H. Jennings (USNM, 12102). BIONOMICS: Larvae in epiphytic bromeliad on fallen tree. Holotype bred from larva.

43. Wyeomyia (W.) incana Dyar, 1922 [= scotinomus]. TYPE: Lectotype ♂ with genitalia slide (1711), Margarita (Canal Zone), 12 Aug 1922, J. B. Shropshire (USNM, 25759; selection of Stone and Knight 1957b: 123). BIONOMICS: Larvae in wild pineapple plants. Lectotype bred from larva.

44. Wyeomyia (W.) simmsi (Dyar & Knab, 1908). TYPE: Holotype ♀, Fort San Felipe, Portobelo (Colón), 4 Jan 1908, A. H. Jennings (USNM, 11976). BIONOMICS: Larva in epiphytic bromeliad. Holotype bred from larva.

45. Wyeomyia (W.) dymodora Dyar & Knab, 1908 [= simmsi]. TYPE: Lectotype ♀ (157), Fort San Felipe, Portobelo (Colón), 21 Jan 1908, A. H. Jennings

(USNM, 11991; selection of Dyar and Knab, 1909: 266). BIONOMICS: Larva in epiphytic bromeliad. Lectotype bred from larva.

46. Wyeomyia (W.) roloncetta Dyar, 1919 [= simmsi]. TYPE: Holotype ♂, old Fort San Felipe, Portobelo (Colón), 5 Mar 1908, A. H. Jennings (USNM, 22027). BIONOMICS: Larvae in epiphytic bromeliads. Holotype bred.

47. Wyeomyia (Davismyia) arborea Galindo, Carpenter & Trapido, 1951. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, Bijao, Chiriquí Volcano (Chiriquí), elev. 3000 ft, 15 Aug 1950 (USNM). BIONOMICS: Immatures in bamboo internode trap placed in upper canopy of forest. Adults biting man in forest canopy (30-45 ft). Holotype bred from egg.

*48. Wyeomyia (Dendromyia) circumcincta Dyar & Knab, 1907. TYPE: Lectotype ♂ (191), native village near Tabernilla (Canal Zone), 10 July 1907, A. Busck (USNM, 10857; selection of Stone and Knight 1957b: 122). BIONOMICS: Larvae in epiphytic bromeliad Tillandsia. Lectotype bred from larva.

49. Wyeomyia (D.) macrotus Dyar & Knab, 1907 [= circumcincta]. TYPE: Lectotype ♀ (104.1) with fragments of larval and pupal skins, Boquerón River (Panamá), 23 May 1907, A. Busck (USNM, 10862; selection of Stone and Knight 1957b: 124). BIONOMICS: Larvae in epiphytic bromeliad Tillandsia.

50. Wyeomyia (D.) andropus Dyar & Knab, 1908 [= circumcincta]. TYPE: Lectotype ♂ (133.2), Fort San Felipe, Portobelo (Colón), 4 Jan 1909, A. H. Jennings (USNM, 11989; selection of Stone and Knight 1957b: 120). BIONOMICS: Larvae in bromeliads.

51. Wyeomyia (D.) intonca Dyar & Knab, 1910 [= circumcincta]. TYPE: Holotype ♂, Empire, Camacho River (Canal Zone), 2 Mar 1909, A. H. Jennings (USNM, 12744). BIONOMICS: Larva in epiphytic bromeliad on fallen tree. Holotype bred from larva.

*52. Wyeomyia (D.) clasoleuca Dyar & Knab, 1908. TYPE: Lectotype ♀, Caldera Island, Portobelo Bay (Colón), date not specified, A. H. Jennings (USNM, 11990; selection of Stone and Knight 1957b: 122). BIONOMICS: [Larvae probably in broken bamboo].

53. Wyeomyia (D.) agyrtes Dyar & Knab, 1909 [= clasoleuca]. TYPE: Holotype ♀, Tabernilla (Canal Zone), 16 May 1907, A. Busck (USNM, 12184). BIONOMICS: Larva in bamboo stump.

54. Wyeomyia (D.) coenoncus Howard, Dyar & Knab, 1913. TYPE: Lectotype ♂ (552.3) with genitalia slide (523), Tabernilla (Canal Zone), 14 Apr 1909, A. H. Jennings (USNM, 12705; selection of Stone and Knight 1957b: 122). BIONOMICS: Larvae in flower bracts of marantaceous plant Calathea discolor.

55. Wyeomyia (D.) complosa (Dyar, 1928). TYPE: Lectotype ♂ with genitalia slide (2285), San Juan de Pequení (Panamá), 11 Nov 1926, D. P. Curry (USNM: selection of Stone and Knight 1957b: 122). BIONOMICS: Larvae in "skunk cabbage" [Dieffenbachia, Araceae].

*56. Wyeomyia (D.) jocosa (Dyar & Knab, 1908). TYPE: Holotype ♀, Caldera Island, Portobelo Bay (Colón), date not specified, A. H. Jennings (USNM, 11975). BIONOMICS: [Larvae in leaf axils of [marantaceous plant] Calathea ssp. and [aroid] Xanthosoma violaceum (Galindo, Carpenter and Trapido 1951: 132)].

57. Wyeomyia (D.) prolepidis Dyar & Knab, 1919 [= jocosa]. TYPE: Lectotype (C-97), Culebra (Canal Zone), date not specified, L. H. Dunn (USNM; selection of Stone and Knight 1957b: 125). BIONOMICS: [Larvae in leaf axils of [aroid] Dieffenbachia sp. (Galindo, Carpenter and Trapido 1951: 132)].

58. Wyeomyia (D.) canfieldi (Dyar & Knab, 1907) [= melanocephala]. TYPE: Holotype ♀, Lion Hill (Canal Zone), 7 May 1907, A. Busck (USNM, 18050).

BIONOMICS: [Larvae probably in leaf axils of Araceae]. Adults biting in "shade of the brush."

59. *Wyeomyia* (D.) *agnostips* Dyar & Knab, 1907 [= *melanocephala*]. TYPE: Holotype ♀, near Tabernilla (Canal Zone), 3 May 1907, A. Busck (USNM, 10858). BIONOMICS: [Larvae probably in leaf axils of Araceae]. Adult biting in bamboo woods.

*60. *Wyeomyia* (D.) *pandora* Dyar & Knab, 1909 [= *melanocephala*]. TYPE: Lectotype ♂ (37) with genitalia slide (4421), Corozal (Canal Zone), 29 Nov 1907, A. H. Jennings (USNM, 12132; selection of Stone and Knight 1957b: 125). BIONOMICS: Larvae in *Caladium* leaf axil [aroid]. Lectotype bred from larva.

61. *Wyeomyia* (D.) *fauna* Dyar & Knab, 1919 [= *melanocephala*]. TYPE: Lectotype ♂ (1114) with genitalia slide, Bas Obispo (Canal Zone), Aug 1913, J. Zetek (USNM, 21999; selection of Stone and Knight 1957b: 123). BIONOMICS: [Larvae probably in leaf axils of Araceae].

62. *Wyeomyia* (D.) *modalma* Dyar, 1922 [= *melanocephala*]. TYPE: Lectotype ♀ (1921/V-15), Gatún (Canal Zone), 10 Dec 1921, J. B. Shropshire (USNM, 25256; selection of Stone and Knight 1957b: 124). BIONOMICS: [Larvae probably in leaf axils of Araceae].

63. *Wyeomyia* (D.) *hemisiris* (Dyar & Shannon, 1925) [= *melanocephala*]. TYPE: Holotype ♀, France Field (Canal Zone), 16 Aug 1923, collector a native assistant to J. B. Shropshire (USNM, 28210). BIONOMICS: Larva "possibly from a coconut shell." Holotype bred from larva.

64. *Wyeomyia* (D.) *phroso* Howard, Dyar & Knab, 1915. TYPE: Holotype ♀, Gatún (Canal Zone), date not specified, A. H. Jennings (USNM, 12704). BIONOMICS: [Larvae probably in bromeliads].

*65. *Wyeomyia* (D.) *proviolans* (Dyar & Knab, 1919) [= *phroso*]. TYPE: Lectotype ♂ (1139) with genitalia slide, Portobelo (Colón), 11 Mar 1907, A. Busck (USNM, 22006; selection of Stone and Knight 1957b: 125). BIONOMICS: [Larvae probably in bromeliads].

66. *Wyeomyia* (D.) *eloisa* Howard, Dyar & Knab, 1913 [= *pseudopecten*]. TYPE: Lectotype ♂ (476) with genitalia slide (505), Miraflores (Canal Zone), 8 Feb 1909, A. H. Jennings (USNM, 12703; selection of Stone and Knight 1957b: 123). BIONOMICS: Larvae in "flower sheaths" of *Calathea discolor* [Marantaceae]. The eggs are laid in the uppermost, just opening, and still dry flower-sheaths, and hatch when moisture accumulates. This moisture is never abundant and is always of a slimy nature. [No indication in original description whether these data would apply to lectotype or to other topotypic material, 3 different localities being cited].

*67. *Wyeomyia* (D.) *onidus* Dyar & Knab, 1909 [= *ulocoma*]. TYPE: Lectotype ♂ (238.6) with associated larval skin and genitalia slide (356), Tabernilla (Canal Zone), 12 Mar 1908, A. H. Jennings (USNM, 12055; selection of Stone and Knight 1957b: 125). BIONOMICS: Larvae in "flower cups" of a *Heliconia* similar to *H. champneiana*.

68. *Wyeomyia* (D.) *pantoia* Dyar & Knab, 1909 [= *ulocoma*]. TYPE: Lectotype ♂ (238) with genitalia slide (442), Tabernilla (Canal Zone), 12 Mar 1908, A. H. Jennings (USNM, 12055; selection of Stone and Knight 1957b: 125). BIONOMICS: The larvae live in the water in the flower cups of a species of *Heliconia* with upright flowers. Mr. Jennings obtained them several times in *Heliconia* of the types of *champneiana* and *luteofusca*.

69. *Wyeomyia* (D.) *cacodela* Dyar & Knab, 1909 [= *ulocoma*]. TYPE: Lectotype ♂ (195), Gorgona (Canal Zone), 7 Feb 1908, A. H. Jennings (USNM, 12183; selection of Stone and Knight 1957b: 121). BIONOMICS: Larvae in the

flower-cups of species of Heliconia of the type of H. acuminata. Lectotype bred from larva.

*70. Wyeomyia (D.) ypsipola Dyar, 1922. TYPE: Holotype ♂, Camacho (Canal Zone), 14 Jan 1922, J. B. Shropshire (USNM, 25257). BIONOMICS: Larvae in treehole; [larvae in [aroid] Dieffenbachia (Galindo, Carpenter and Trapido 1951: 131)].

71. Limatus cacophrades Dyar & Knab, 1909 [= durhamii]. TYPE: Lectotype ♂ (385.1) with associated larval and pupal skins, Tabernilla (Canal Zone), date not specified, A. H. Jennings (USNM, 12130; selection of Stone and Knight 1957b: 117). BIONOMICS: Larvae in bamboo.

72. Sabethes (S.) tarsopus Dyar & Knab, 1908. TYPE: Lectotype ♀ (10413), Bocas del Toro (Bocas del Toro), 28 Sept 1903, P. Osterhout (USNM, 11972; selection of Stone and Knight 1957b: 118). BIONOMICS: [Eggs laid primarily in January; one larva in bamboo trap; adults primarily arboreal (Galindo, Carpenter and Trapido 1951: 134); larvae probably in bamboo internodes or tree-holes with small lateral opening].

73. Sabethes (Sabethinus) identicus Dyar & Knab, 1907. TYPE: Holotype ♀ (51.2), near Tabernilla (Canal Zone), May 1907, A. Busck (USNM, 10851). BIONOMICS: Larvae in bamboo traps.

74. Mansonia (Rhynchotaenia) coticula (Dyar & Knab, 1907) [= arribalzagai]. TYPE: Lectotype ♀ (USDA 10417), Bocas del Toro (Bocas del Toro), 25 Sept 1903, P. Osterhout (USNM, 10281; selection of Stone and Knight 1957c: 198). BIONOMICS: [Larvae probably on rootlets of grasses and other herbaceous vegetation in mud and fine sediment in very shallow water on the margins of swamps, ponds or streams].

75. Mansonia (R.) nigricans (Coquillett, 1904). TYPE: Lectotype ♀, Panamá, locality not specified, 18 Apr 1904, J. W. Ross (USNM, 7943; selection of Stone and Knight 1957c: 198). BIONOMICS: [Larvae dipped from roots of grass comprising floating island (Dyar 1928: 258)].

76. Uranotaenia calosomata Dyar & Knab, 1907. TYPE: Lectotype ♂ (23.8) with portion of associated larval skin, near Tabernilla (Canal Zone), 2 May 1907, A. Busck (USNM, 10866; selection of Stone and Knight 1957c: 200). BIONOMICS: Larvae in deep hoof-prints in a swampy meadow; [has been collected only in March (Arnett 1948: 175)].

77. Uranotaenia incognita Galindo, Blanton & Peyton, 1954. TYPE: Holotype ♂, David (Chiriquí), 13 Dec 1952 (USNM). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters]. Adults collected in light traps.

78. Uranotaenia paludosa Galindo, Blanton & Peyton, 1954. TYPE: Holotype ♂, Almirante (Bocas del Toro), 17 Apr 1953 (USNM). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters]. Adults taken in light traps.

79. Uranotaenia telmatophila Galindo, Blanton & Peyton, 1954. TYPE: Holotype ♂ with associated larval and pupal skins, Tocumen (Panamá), Mar 1953 (USNM). BIONOMICS: Larvae among matted roots of Euirena umbellata Rottb. in a large open swamp; found in relative abundance during the dry season, virtually disappear from the breeding places during the rainy season months. Adults taken in light traps near extensive freshwater swamps.

80. Uranotaenia trapidoi Galindo, Blanton & Peyton, 1954. TYPE: Holotype ♂ with associated larval and pupal skins, El Hato (Chiriquí), elev. 4500 ft, 17 May (USNM). BIONOMICS: Larvae in partly shaded, cold, mountain springs.

81. *Uranotaenia typhlosomata* Dyar & Knab, 1907. TYPE: Holotype ♂, Taboga Island (Panamá), 27 Apr 1908, A. H. Jennings (USNM, 10918). BIONOMICS: Larvae in a still pool in a small stream and in holes along this stream which were more or less open crevices under rocks, inhabited by crabs, about a quarter of a mile from the beach, at a good elevation. The adult mosquitoes were hiding in large crevices among the rocks in the immediate vicinity of the holes. The water was fresh. Holotype bred from larva.

82. *Orthopodomyia phyllozoa* (Dyar & Knab, 1907). TYPE: Holotype ♂, native village near Tabernilla (Canal Zone), 25 June 1907, A. Busck (USNM, 10864). Larvae in epiphytic bromeliads.

83. *Aedes (Ochlerotatus) hastatus* Dyar, 1922. TYPE: Holotype ♂, Paitilla (Panamá), 17 Dec 1921, J. B. Shropshire (USNM, 25212). BIONOMICS: Larvae in ground pools. Holotype bred from larva.

84. *Aedes (O.) polyagrus* Dyar, 1918 [= *serratus*]. TYPE: Holotype ♂ with associated larval skin (dried out), Taboga Island (Panamá), 1 July 1907, A. Busck (USNM, 21551). BIONOMICS: [Larvae probably in temporary ground pools and flooded edges of forested swamps].

85. *Aedes (Finlaya) clarki* Galindo, Carpenter & Trapido, 1953 [ssp. of *leucocelaenus*]. TYPE: Holotype ♂ with associated larval and pupal skins and genitalia slide, Tucué (Coclé), 5 Sept 1950 (USNM). BIONOMICS: [Larvae probably in treeholes]. Parent ♀ biting man in forest. Holotype bred from egg.

86. *Aedes (F.) leucotaeniatus* Komp, 1938. TYPE: Holotype ♂ with genitalia slide (1689), Camacho (Canal Zone), 22 Apr 1922, J. B. Shropshire (USNM). BIONOMICS: [Larvae in bamboo traps on slopes of forested hills (Galindo, Carpenter and Trapido 1951: 120)].

87. *Aedes (F.) lithoecetor* Dyar & Knab, 1907. TYPE: Lectotype ♀ (101.5), larval and pupal skins missing, upper Río Chagres between Alhajuela and San Juan (Panamá), 20 May 1907, A. Busck (USNM, 10868; selection of Stone and Knight 1956a: 220). BIONOMICS: Larvae in a pot-hole in a rock at edge of river.

88. *Haemagogus (H.) argyromeris* Dyar & Ludlow, 1921. TYPE: Lectotype ♂ with genitalia slide (1456), Corozal (Canal Zone), 27 Oct 1920, no collector (USNM; selection of Stone and Knight 1955: 287). BIONOMICS: [Larvae in treeholes, rockholes, coconut husks, artificial containers and occasionally ground pools].

89. *Haemagogus (H.) gladiator* Dyar, 1921 [= *argyromeris*]. TYPE: Holotype ♂ (39) with genitalia slide (1488), Corozal (Canal Zone), 30 Nov 1909, A. H. Jennings (USNM, 24340). BIONOMICS: Larvae in treehole near Kraft's house. Holotype bred from larva.

90. *Haemagogus (H.) chalcospilans* Dyar, 1921. TYPE: Holotype ♂ (247) and genitalia slide (1481), Caldera Island, Portobelo Bay (Colón), 27 Mar 1908, A. H. Jennings (USNM, 24334). BIONOMICS: Larvae in salt pools in rocks near the seacoast; [specially addicted to rot cavities in mangrove trees (Galindo, Carpenter and Trapido 1951: 119)]. Holotype bred, presumably from larva.

91. *Haemagogus (H.) lucifer* (Howard, Dyar & Knab, 1913). TYPE: Lectotype ♂ (299) on slide 309, Tabernilla (Canal Zone), 14 Apr 1909, A. H. Jennings (USNM; selection of Dyar 1921: 107; see Stone and Knight 1955: 288). BIONOMICS: Larvae in treeholes.

92. *Culex (Lutzia) allostigma* (Howard, Dyar & Knab, 1915). TYPE: Lectotype ♂ (149.8) with associated larval and pupal skins and genitalia slide (592), Las Cascadas (Canal Zone), 16 Jan 1908, A. H. Jennings (USNM, 14501;

selection of Stone and Knight 1957a: 42; lectotype does not bear type number). BIONOMICS: Larvae from a rusty bucket near a house at Las Cascadas, with no other mosquito larvae present.

93. Culex (C.) chidesteri Dyar, 1921. TYPE: Lectotype ♂ (1520) with genitalia slide, Colón (Colón), 24 June 1921, W. F. Chidester (USNM, 24716; selection of Stone and Knight 1957a: 45). BIONOMICS: [Larvae in open sunny swamps, in deeply shaded pools and in slow flowing streams with floating debris (Arnett 1948: 179)]. Adults taken on hospital screens between 0700 and 0800 hrs.

94. Culex (C.) loquaculus Dyar & Knab, 1909 [= corniger]. TYPE: Lectotype ♀, Corozal (Canal Zone), date and collector not specified (USNM, 12050; selection of Stone and Knight 1957a: 52). BIONOMICS: [Larvae probably in rockholes, treeholes, ground pools or artificial containers].

95. Culex (C.) ousqua Dyar, 1918 [= coronator]. TYPE: Holotype ♂ (181.1), Panama, date not specified, A. Busck (USNM, 21602). BIONOMICS: [Larvae in all types of permanent and semi-permanent ground waters].

96. Culex (C.) usquatissimus Dyar, 1922 [= coronator]. TYPE: Lectotype ♂ (1588) with genitalia slide, Toro Point (Canal Zone), 27 Oct 1921, J. B. Shropshire (USNM, 25147; selection of Stone and Knight 1957a: 57). BIONOMICS: [Larvae in all types of permanent and semi-permanent ground waters].

97. Culex (C.) jubilator Dyar & Knab, 1907 [= declarator]. TYPE: Lectotype ♂ (3), Taboga Island (Panamá), date not specified, A. H. Jennings (USNM, 16916 (cited as 10916 in original description); selection of Stone and Knight 1957a: 52). BIONOMICS: Larvae in old tubs in a pasture near the bathing beach. Lectotype bred from larva.

98. Culex (C.) revelator Dyar & Knab, 1907 [= declarator]. TYPE: Lectotype ♂ (25.2) with genitalia slide (341), Taboga Island (Canal Zone), date not specified, A. H. Jennings (USNM, 10917; selection of Stone and Knight 1957a: 55). BIONOMICS: Larvae in boat containing water. Lectotype bred from larva.

99. Culex (C.) delys Howard, Dyar & Knab, 1915. TYPE: Holotype ♀, associated larval skin not preserved, Tabernilla (Canal Zone), 15 Dec 1908, A. H. Jennings (USNM, 12706). BIONOMICS: Larva in swampy pond in bamboo woods.

100. Culex (C.) reflector Dyar & Knab, 1909 [= interrogator]. TYPE: Lectotype ♂, Ancón (Canal Zone), date not specified, A. H. Jennings (USNM, 12101; selection of Stone and Knight 1957a: 55). BIONOMICS: Larvae in treehole. Lectotype bred from larva.

101. Culex (C.) laticlasper Galindo & Blanton, 1954. TYPE: Holotype ♂ and dissected genitalia on same slide, Cerro Punta, Chiriquí Volcano region (Chiriquí), elev. 6500 ft, 10 Dec 1952 (USNM). BIONOMICS: Larvae in palm spathes on forest floor [however, authors state that larva and pupa unknown]. Holotype taken at light.

102. Culex (C.) equivocator Dyar & Knab, 1907 [= mollis]. TYPE: Lectotype ♂ (49.10), Tabernilla (Canal Zone), 9 May-18 July 1907, A. Busck (USNM, 10873; selection of Stone and Knight 1957a: 48). BIONOMICS: Larvae in bamboo joints. Lectotype bred from larva.

103. Culex (C.) elocutilis Dyar & Knab, 1909 [= mollis]. TYPE: Lectotype ♂ (399) with genitalia slide (340), 2.5 miles from mouth of Cascajal River, Portobelo Bay (Colón), 30 May 1908, A. H. Jennings (USNM, 12051; selection of Stone and Knight 1957a: 48). BIONOMICS: Larvae in a hole in the center of a large "cedar" stump, newly cut, the water foul and highly colored. Lectotype bred from larva.

104. Culex (C.) lepostenis Dyar, 1923 [= mollis]. TYPE: Holotype ♂, Cascajal River, Portobelo Bay (Colón), 30 May 1908, A. H. Jennings (USNM). BIONOMICS: Larvae in leaf-bases of epiphytic bromeliads.
105. Culex (C.) proximus Dyar & Knab, 1909 [= nigripalpus]. TYPE: Lectotype ♂ (5.10) with genitalia slide (397), Taboga Island (Panamá), date not specified, A. H. Jennings (USNM, 12208; selection of Stone and Knight 1957a: 55). BIONOMICS: Larvae in a tub of water used for cattle.
106. Culex (Melanoconion) panocossa Dyar, 1923 [= aikenii]. TYPE: Lectotype ♂ with genitalia slide (1809), Bas Obispo (Canal Zone, Feb 1923, J. B. Shropshire (USNM; selection of Stone and Knight 1957a: 54). BIONOMICS: Larvae among roots of Pistia. Lectotype bred from larva.
107. Culex (Mel.) cuclyx Dyar & Shannon, 1924 [= bastagarius]. TYPE: Holotype ♂, Cardenas River, Fort Clayton (Canal Zone), Apr 1923, R. C. Shannon (USNM). BIONOMICS: [Larvae only in slow flowing streams with vegetation, sunny; October (Arnett 1948: 185)].
108. Culex (Mel.) caribeanus Galindo & Blanton, 1954. TYPE: Holotype ♂ and dissected genitalia mounted upon same slide. Mojinga Swamp (Canal Zone), 6 July 1952 (USNM). BIONOMICS: [Larvae probably in ground waters]. Adults "taken at light."
109. Culex (Mel.) changuinolae Galindo & Blanton, 1954. TYPE: Holotype ♂ and dissected genitalia on same slide, vicinity of Almirante (Bocas del Toro), 1 May 1953 (USNM). BIONOMICS: Adults taken in light trap.
110. Culex (Mel.) chrysonotum Dyar & Knab, 1908. TYPE: Lectotype ♂ (417) with genitalia slide (337), Ancón (Canal Zone), 14 Aug 1908, A. H. Jennings (USNM, 11966; selection of Rozeboom and Komp 1950: 88; see Stone and Knight 1957a: 45-46). BIONOMICS: Larvae in a ditch, in a small patch of algae beside railroad track, and in a swamp [pertains to 3 separate collections of type series].
111. Culex (Mel.) dysmathes Dyar & Ludlow, 1921 [= conspirator]. TYPE: Lectotype ♂ (1346) with genitalia slide, Cativa (Colón), 19 Oct 1920, J. B. Shropshire (USNM, 23943; selection of Stone and Knight 1957a: 48). BIONOMICS: [Larvae in shady rockpools; rainy season (Arnett 1948: 186)].
112. Culex (Mel.) fatuator Dyar & Shannon, 1924 [= conspirator]. TYPE: Holotype ♂, Cardenas River (Canal Zone), Apr 1923, R. C. Shannon (USNM). BIONOMICS: [Larvae in ground pools of permanent nature (Dyar 1928: 306)].
113. Culex (Mel.) distinguendus Dyar, 1928. TYPE: Lectotype ♂ with genitalia slide (2327), Mojinga Swamp, Atlantic side (Canal Zone), 5 July 1927, D. P. Curry (USNM, 40777; selection of Rozeboom and Komp 1950: 89). BIONOMICS: [Larvae in small, densely shaded jungle pool (Foote 1954: 42)].
114. Culex (Mel.) dunni Dyar, 1918. TYPE: Lectotype ♂ (C-39) and genitalia slide, Mandinga River (Canal Zone), date not specified, L. H. Dunn (USNM, 21714; selection of Stone and Knight 1957a: 48). BIONOMICS: Larvae associated with Pistia. Lectotype reared from larva.
115. Culex (Mel.) ruffinis Dyar & Shannon, 1924 [= dunni]. TYPE: Holotype ♂, Barro Colorado Island (Canal Zone), 9 July 1923, R. C. Shannon (USNM). BIONOMICS: [Larvae in permanent ground waters, associated with Pistia].
116. Culex (Mel.) apeteticus Howard, Dyar & Knab, 1913 [= educator]. TYPE: Lectotype ♂ (522) with genitalia slide, Upper Pequení River (Panamá), 27 Mar 1909, A. H. Jennings (USNM, 12707; selection of Stone and Knight 1957a: 43). BIONOMICS: Larvae in a swampy pond and in holes in rocks [pertains to 2 separate collections].

117. Culex (Mel.) aneles Dyar & Ludlow, 1922 [= educator]. TYPE: Lectotype ♂, Cardenas River (Canal Zone), 11 Feb 1921 (USNM, 25069; selection of Stone and Knight 1957a: 43). BIONOMICS: [Larvae in grassy pools and streams in the sun; July to October (Arnett 1948: 168)].

118. Culex (Mel.) egcymon Dyar, 1923. TYPE: Lectotype ♂, 3 legs dry mounted and the rest on slide 1780, Tabernilla (Canal Zone), 2 May 1907, A. Busck (USNM; selection of Stone and Knight 1957a: 48). BIONOMICS: Larvae in slowly running spring, full of leaves and small fish. Lectotype bred from larva.

119. Culex (Mel.) elephas Komp, 1936. TYPE: Holotype ♂ with genitalia slide, Juan Díaz (Panamá), 28 Jan 1936 (USNM). BIONOMICS: [Larvae probably in permanent ground waters]. Holotype taken by sweeping.

120. Culex (Mel.) curryi Dyar, 1926 [= elevator]. TYPE: Lectotype ♂ on slide, Mojinga River Swamp, west of canal entrance, about 5 miles from Cristóbal (Canal Zone), 20 Apr 1926, D. P. Curry (USNM, 29375; selection of Stone and Knight 1957a: 46). BIONOMICS: Larvae in a rock pool in a trickling stream in a dense jungle swamp. Lectotype bred from larva.

121. Culex (Mel.) dornarum Dyar & Shannon, 1924 [= elevator]. TYPE: Holotype ♂, Sweet Water Reservoir, Fort Sherman (Canal Zone), 5 Sept 1923, R. C. Shannon (USNM). BIONOMICS: [Larvae in rock pools, rockholes, jungle streams, one record in fallen log, in the shade, usually in flowing water; common in rainy season (Arnett 1948: 189)].

122. Culex (Mel.) leprincei Dyar & Knab, 1907 [= erraticus]. TYPE: Lectotype ♂, near Tabernilla (Canal Zone), 26 Apr 1907, A. Busck (USNM, 10869; selection of Stone and Knight 1957a: 52). BIONOMICS: Larvae from a large ill-smelling pool caused by dumping of dirt. Lectotype bred from larva.

123. Culex (Mel.) trachycampa Dyar & Knab, 1909 [= erraticus]. TYPE: Lectotype ♂ (54.1) with genitalia slide (401), Las Cascadas (Canal Zone), 13 May 1907, C. H. Bath (USNM, 12194; selection of Stone and Knight 1957a: 57). BIONOMICS: Larvae in a ground pool.

124. Culex (Mel.) fairchildi Galindo & Blanton, 1954. TYPE: Holotype ♂ and dissected genitalia on same slide, Patiño Point (Darién), 17 July 1952 (USNM). BIONOMICS: Adults "taken at light."

125. Culex (Mel.) flabellifer Komp, 1936. TYPE: Holotype ♂ with genitalia slide, Santa Rosa (Colón), June 1932 (USNM; only the genitalia slide remains, see Stone and Knight 1957a: 58). BIONOMICS: [Larvae probably in permanent ground waters]. Holotype taken by sweeping.

126. Culex (Mel.) galindoi Komp & Rozeboom, 1951. TYPE: Holotype ♂ genitalia on slide, Quebrada Escondida, Río Pequení (Panamá), 26 Mar 1949, P. Galindo V. and H. Trapido (USNM, 59875). BIONOMICS: [Larvae probably in permanent ground waters]. Holotype taken in rock crevices along a stream.

127. Culex (Mel.) iolambdis Dyar, 1918. TYPE: Holotype ♂, [no specific locality in Panama, presumably in Canal Zone], date not specified, A. Busck (USNM, 21603). BIONOMICS: [Larvae in rims of small ponds or from standing water in the aerial roots of mangrove in Florida (Pratt and Seabrook 1952: 29)].

128. Culex (Mel.) johnsoni Galindo & Mendez, 1961. TYPE: Holotype ♂ genitalia on slide, Pacora (Panamá), Oct 1958 (USNM). BIONOMICS: [Larvae probably in permanent ground waters]. Holotype taken by sweeping.

129. Culex (Mel.) jubifer Komp & Brown, 1935. TYPE: Holotype ♂ with genitalia slide, Mojinga Swamp (Canal Zone), Aug 1932, C. G. Brown (USNM; only genitalia slide remaining, see Stone and Knight 1957a: 59). BIONOMICS: [Larvae probably in permanent ground waters].

130. Culex (Mel.) keenani Galindo & Mendez, 1961. TYPE: Holotype ♂ with genitalia slide, Pacora (Panamá), 27 May 1959 (USNM). BIONOMICS: [Larvae probably in permanent ground waters]. Adults collected at light in a Shannon trap.

131. Culex (Mel.) kummi Komp & Rozeboom, 1951. TYPE: Holotype ♂ genitalia on slide, "Chino Swamp," Almirante (Bocas del Toro), 14 July 1934, W. H. W. Komp (USNM, 59874). BIONOMICS: [Larvae in swamps (Foote 1954: 64)].

*132. Culex (Mel.) menytes Dyar, 1918. TYPE: Holotype ♂, Trinidad River (Canal Zone), 20 Mar 1912, A. Busck (USNM, 21716). BIONOMICS: [Larvae probably in permanent ground waters].

*133. Culex (Mel.) haynei Komp & Curry, 1932 [= menytes]. TYPE: Holotype ♂ with genitalia slide, Mojinga Swamp, lower Chagres River (Canal Zone), date not specified, W. H. W. Komp and D. P. Curry (USNM; genitalia slide only, see Stone and Knight 1957a: 59). BIONOMICS: [Larvae probably in permanent ground waters].

134. Culex (Mel.) mesodenticulatus Galindo & Mendez, 1961. TYPE: Holotype ♂ and dissected genitalia on same slide, vicinity of Almirante (Bocas del Toro), 17 Apr 1953 (USNM). BIONOMICS: [Larvae probably in permanent ground waters]. Holotype "taken at light."

135. Culex (Mel.) mychonde Komp in Dyar 1928 [= opisthopus]. TYPE: Holotype ♂, Almirante (Bocas del Toro), 1 Feb 1928, W. H. W. Komp (USNM; only the genitalia remain, Stone and Knight 1957a: 59). BIONOMICS: [Larvae probably in streams or swamps, possibly in crabholes].

136. Culex (Mel.) paracrybda Komp, 1936. TYPE: Holotype ♂ with genitalia slide, Juan Díaz (Panamá), 28 Jan 1936 (USNM). BIONOMICS: [Larvae probably in permanent ground waters]. Holotype taken by sweeping.

137. Culex (Mel.) psatharus Dyar, 1920. TYPE: Lectotype ♂ (1318) with genitalia slide, Colón (Colón), 28 July 1920, W. S. Chidester (USNM; selection of Rozeboom and Komp 1950: 95). BIONOMICS: [Larvae in brackish pools in jungle (Dyar 1928: 296)]. Adults taken on screens of Colón hospital.

138. Culex (Mel.) pseudotaeniopus Galindo and Blanton, 1954. TYPE: Holotype ♂ and dissected genitalia on same slide, Mojinga Swamp (Canal Zone), 17 June 1952 (USNM). BIONOMICS: Larvae in shallow pools among rocks or buttressed roots in slowly flowing, densely shaded, jungle streams. Holotype taken at light.

139. Culex (Mel.) quadrifolius Komp, 1936. TYPE: Holotype ♂ with genitalia slide, Mojinga Swamp, lower Chagres River, Atlantic side (Canal Zone), 6 Dec 1933 (USNM; only the genitalia slide remains, see Stone and Knight 1957a: 59). BIONOMICS: [Larvae probably in permanent ground waters].

140. Culex (Mel.) quasihibridus Galindo & Blanton, 1954. TYPE: Holotype ♂ and dissected genitalia on same slide, Puerto Pilón (Colón), 28 Aug 1952 (USNM). BIONOMICS: [Larvae probably in permanent ground waters].

141. Culex (Mel.) bilobatus Galindo & Blanton, 1954 [= sardinerae]. TYPE: Holotype ♂ and dissected genitalia on same slide, Río Banana, near Almirante (Bocas del Toro), 20 Mar 1953 (USNM). BIONOMICS: [Larvae probably in permanent ground waters]. Holotype collected in light trap.

142. Culex (Mel.) fur Dyar & Knab, 1907 [= spissipes]. TYPE: Holotype ♀, Colón (Colón), date not specified, A. C. H. Russell (USNM, 10259). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

143. Culex (Mel.) epanastasis Dyar, 1922 [= taeniopus]. TYPE: Holotype ♂, Arenal River, Toro Point (Canal Zone), 19 July 1922, J. B. Shropshire

(USNM, 25761). BIONOMICS: Larva in river. Holotype bred from larva.

144. Culex (Mel.) tecmarsis Dyar, 1918. TYPE: Lectotype ♂ with genitalia slide (925), Trinidad River (Canal Zone), 9 June 1912, A. Busck (USNM, 21715; selection of Rozeboom and Komp 1950: 97). BIONOMICS: [Larvae probably in permanent ground waters]. Adults taken at light.

145. Culex (Mel.) vomerifer Komp, 1932. TYPE: Holotype ♂ and genitalia slide, Almirante (Bocas del Toro), date not specified, W. H. W. Komp (USNM, only the genitalia slide remains, see Stone and Knight 1957a: 59). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

146. Culex (Mel.) zeteki Dyar, 1918. TYPE: Holotype ♂, Gatún (Canal Zone), 16 Jan 1913, J. Zetek (USNM, 21778). BIONOMICS: [Larvae in grassy, more or less permanent pools in Surinam (Bonne and Bonne-Wepster 1925: 274)].

147. Culex (Mochlostyrax) arboricolus Galindo & Mendez, 1961. TYPE: Holotype ♂ (01306) with genitalia slide, Cerro La Victoria (Panamá), 4 Jan 1950 (USNM). BIONOMICS: Larvae in treeholes.

148. Culex (Mochl.) lacertosus Komp & Rozeboom, 1951. TYPE: Holotype ♂ genitalia slide, Almirante (Bocas del Toro), 19 July 1934, W. H. W. Komp (USNM, 59870). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

149. Culex (Mochl.) hesitator Dyar & Knab, 1907 [= pilosus]. TYPE: Lectotype ♂, near Las Cascadas (Canal Zone), 18 May 1907, A. Busck (USNM, 10872; selection of Stone and Knight 1957a: 50). BIONOMICS: Pupae in a small swampy stream. Lectotype bred from pupa.

150. Culex (Mochl.) rooti Rozeboom, 1935. TYPE: Lectotype ♂ genitalia, a few miles east of Panamá City (Panamá), 24 Nov 1934 (USNM, 50942; selection of Stone and Knight 1957a: 55). BIONOMICS: Larvae in ground pools.

151. Culex (Mochl.) vexillifer Komp, 1936. TYPE: Lectotype ♂ with genitalia slide, Barro Colorado Island (Canal Zone), 15 Jan 1935, W. H. W. Komp (USNM; selection of Rozeboom and Komp 1950: 97; only the genitalia slide remains, see Stone and Knight 1957a: 58). BIONOMICS: Larvae in water held between the buttressed roots of a tree overhanging a stream; [larvae normally in treeholes (Galindo, Carpenter and Trapido 1951: 127)].

152. Culex (Microculex) daumastocampa Dyar & Knab, 1908. TYPE: Lectotype ♂ (135.4) with fragments of associated larval skin and genitalia slide (402), Fort San Felipe, Portobelo Bay (Colón), 21 Jan 1908, A. H. Jennings (USNM, 11967; selection of Stone and Knight 1957a: 46). BIONOMICS: Larvae between leaves of a bromeliad.

153. Culex (Micr.) erethyzonfer Galindo & Blanton, 1954. TYPE: Holotype ♂ with genitalia slide, Palo Santo, Chiriquí Volcano region (Chiriquí), elev. 4500 ft, 18 Oct 1950 (USNM). BIONOMICS: Larvae in epiphytic bromeliads [not from type locality but in Chiriquí Volcano region]. Holotype taken sweeping in dense forest.

154. Culex (Micr.) gaudeator Dyar & Knab, 1907. TYPE: Lectotype ♂, near Tabernilla (Canal Zone), 10 July 1907, A. Busck (USNM, 10871; selection of Stone and Knight 1957a: 52). BIONOMICS: Larvae in epiphytic bromeliad Tillandsia. Lectotype bred from larva.

155. Culex (Micr.) jenningsi Dyar & Knab, 1907. TYPE: Lectotype ♂, native village near Tabernilla (Canal Zone), 10 July 1907, A. Busck (USNM, 10867; selection of Stone and Knight 1957a: 52). BIONOMICS: Larvae in epiphytic bromeliad Tillandsia. Lectotype bred from larva.

156. Culex (Aedinus) browni Komp, 1936. TYPE: Holotype ♂ with genitalia slide, near the "Army boundary ditch" near Gatún (Canal Zone), 29 Nov 1933,

C. G. Brown (USNM). BIONOMICS: [Larvae probably in treeholes or bromeliads]. Holotype taken by sweeping.

157. Culex (A.) bifoliata Dyar, 1922 [= conservator]. TYPE: Lectotype ♂ (1644) with genitalia slide, Miraflores (Canal Zone), 15 Dec 1921, J. B. Shropshire (USNM, 25254; selection of Stone and Knight 1957a: 44). BIONOMICS: Larvae in treehole. Lectotype bred from larva.

158. Culex (A.) corrigani Dyar & Knab, 1907. TYPE: Holotype ♀, near Tabernilla (Canal Zone), 18 July 1907, A. Busck (USNM, 10870). BIONOMICS: Larvae in bamboo joints. Holotype bred from larva.

159. Culex (A.) chalcocorystes Martini, 1914 [= corrigani]. TYPE: ♂ and ♀, Portobelo (Colón), Nov 1913, E. Martini (BM). BIONOMICS: [Larvae probably in treeholes]. Adults in an old cistern.

160. Culex (Carrollia) secundus Bonne-Wepster & Bonne, 1920. TYPE: ♂, ♀, larva, Canal Zone (LU). BIONOMICS: [Larvae in bamboo traps, treeholes and on the ground in palm spathes and artificial containers (Galindo, Carpenter and Trapido 1951: 126)].

161. Deinocerites dyari Belkin & Hogue, 1959. TYPE: Holotype ♂ (1183), Corozal (Canal Zone), 20 Apr 1919, J. Zetek (USNM, 64262). BIONOMICS: [Larvae in crabholes].

162. Deinocerites melanophyllum Dyar & Knab, 1907. TYPE: Lectotype ♂ (213), back of the wireless telegraph station at Colón (Colón), 20 July 1907, A. Busck (USNM, 10876; selection of Stone and Knight 1957c: 197). BIONOMICS: Larvae and adults in crabholes, adults swarming above hole at dusk, not biting man. Lectotype bred from larva.

163. Deinocerites monospathus Dyar, 1925 [= melanophyllum]. TYPE: Holotype ♀, Fort Sherman (Canal Zone), 24 Apr 1925, D. Baker (USNM, 28309). BIONOMICS: [Larvae in crabholes].

164. Deinocerites pseudus Dyar & Knab, 1909. TYPE: Lectotype ♀ (378), Ancón (Canal Zone), 13 July or 24 Nov 1908, A. H. Jennings (USNM, 12053; selection of Stone and Knight 1957c: 197). BIONOMICS: Larvae in crabholes.

*165. Deinocerites spanius (Dyar & Knab, 1909). TYPE: Lectotype ♀ (69), Corozal (Canal Zone), 11 Dec 1907, A. H. Jennings (USNM, 12052; selection of Stone and Knight 1957c: 197). BIONOMICS: Larvae in crabholes. Lectotype bred from larva.

166. Corethrella ananacola Dyar, 1926. TYPE: Larva, pupa and adult, near Gatún (Canal Zone) (cited as Ft. Randolph, C. Z., Lane 1953: 85), date not specified, C. H. Bath (USNM). BIONOMICS: Larvae in bromeliad Ananas magdalenae. Adult(s) bred.

167. Corethrella blanda Dyar, 1928. TYPE: Holotype ♂ on slide, Las Sabanas (Canal Zone), 28 May 1928, D. P. Curry (USNM, 40517). BIONOMICS: Larvae in shaded grassy pool, cannibalistic when first placed together in "tube." Holotype bred from larva.

168. Corethrella dyari Lane, 1942. TYPE: Holotype ♀, Darién (Canal Zone), "XIII. 1923," H. G. Dyar and R. C. Shannon (USNM). BIONOMICS: [Larvae probably in permanent ground waters or treeholes].

169. Corethrella jenningsi Lane, 1942. TYPE: Holotype ♀, Canal Zone, date not specified (1938-9), A. H. Jennings (USNM). BIONOMICS: [Larvae probably in permanent ground waters or treeholes].

170. Corethrella stonei Lane, 1942. TYPE: Holotype ♂, Caldera Island, Portobelo Bay (Colón), date not specified, A. H. Jennings (USNM). BIONOMICS: [Larvae probably in crabholes]. Adults presumably in crabholes.

171. Lutzomiops pallida (Lane, 1942). TYPE: Holotype ♂, Portobelo (Colón),

date and collector not specified (USNM). BIONOMICS: Larvae in bromeliad *Tillandsia*.

172. *Sayomyia festivus* (Dyar & Shannon, 1924) [= *brasiliensis*]. TYPE: ♂, ♀, Matachin (Canal Zone), 2 June 1908, A. H. Jennings (USNM, 27458). BIONOMICS: [Larvae probably in stagnant permanent ground waters].

173. *Dixella atra* (Lane, 1942). TYPE: Holotype ♀, Caño Saddle, Gatún Lake (Canal Zone), 13 May 1923, R. C. Shannon (USNM). BIONOMICS: [Larvae probably in vegetation in streams, ponds or other ground waters].

*174. *Dixella lirio* (Dyar & Shannon, 1924). TYPE: Holotype ♂, Monte Lirio (Canal Zone), Sept 1923, H. G. Dyar and R. C. Shannon (USNM, 27455). BIONOMICS: [Larvae probably in vegetation in streams, ponds or other ground waters].

List of Localities

BOCAS DEL TORO

Almirante and vicinity: 2. *Anopheles* (S.) *kompi*; 9. *Anopheles* (A.) *anomalophyllus* (Wenham's farm); 78. *Uranotaenia paludosa*; 109. *Culex* (Mel.) *chanuinolae*; 131. *Culex* (Mel.) *kummi* (Chino swamp); 134. *Culex* (Mel.) *mesodenticulatus*; 135. *Culex* (Mel.) *mychonde*; 141. *Culex* (Mel.) *bilobatus* (Banana River); 145. *Culex* (Mel.) *vomerifer*; 148. *Culex* (Mochl.) *lacertosus*.

Locality not specified: 72. *Sabethes* (S.) *tarsopus*; 74. *Mansonia* (R.) *cotricula*.

CANAL ZONE

Agua Clara Reservoir, near Gatún [Atlantic]: 26. *Wyeomyia* (W.) *charmion*. Ancón [Pacific]: 100. *Culex* (C.) *reflector*; 110. *Culex* (Mel.) *chrysonotum*; 164. *Deinocerites pseudes*.

Barro Colorado Island [Atlantic]: 115. *Culex* (Mel.) *ruffinis*; 151. *Culex* (Mochl.) *vexillifer*.

Bas Obispo [Atlantic]: 61. *Wyeomyia* (D.) *fauna*; 106. *Culex* (Mel.) *panocossa*.

Camacho [Atlantic]: 3. *Anopheles* (A.) *niveopalpis* (Camacho Reservoir); 51. *Wyeomyia* (D.) *intonca* (Empire, Camacho River); 70. *Wyeomyia* (D.) *ypsipola*; 86. *Aedes* (F.) *leucotaeniatus*.

Camp Gaillard (? Ancón) [Pacific]: 19. *Trichoprosopon* (I.) *shropshirei*.

Caño Saddle, Gatún Lake, 14 m southwest of Gatún [Atlantic]: 173. *Dixella atra*.

Cardenas (Río) [Pacific]: 112. *Culex* (Mel.) *fatuator*; 117. *Culex* (Mel.) *aneles*.

Corozal [Pacific]: 18. *Trichoprosopon* (I.) *espini* (also Culebra and Miraflores Lake); 60. *Wyeomyia* (D.) *pandora*; 88. *Haemagogus* (H.) *argyromeris*; 89. *Haemagogus* (H.) *gladiator*; 94. *Culex* (C.) *loquaculus*; 161. *Deinocerites dyari*; 165. *Deinocerites spanius*.

Culebra [Atlantic]: 18. *Trichoprosopon* (I.) *espini* (also Corozal and Miraflores Lake); 33. *Wyeomyia* (W.) *culebrae*; 57. *Wyeomyia* (D.) *prolepidis*.

Darién [Atlantic]: 168. *Corethrella dyari*.

Empire [Atlantic]: See Camacho.

Fort Clayton [Pacific]: 28. *Wyeomyia* (W.) *florestan*; 107. *Culex* (Mel.) *cuclyx*.

Fort Sherman [Atlantic]: 121. *Culex* (Mel.) *dornarum* (Sweet Water Reservoir); 163. *Deinocerites monospathus*.

France Field [Atlantic]: 63. Wyeomyia (D.) hemisiris.

Gatún [Atlantic]: 1. Chagasia bathana; 4. Anopheles (A.) neomaculipalpis (also Panama City); 14. Anopheles (K.) hylephilus; 62. Wyeomyia (D.) modalma; 64. Wyeomyia (D.) phroso; 146. Culex (Mel.) zeteki; 156. Culex (A.) browni; 166. Corethrella ananacola.

Gorgona [Atlantic]: 69. Wyeomyia (D.) cacodela.

La Boca (Balboa) [Pacific]: 8. Anopheles (N.) gorgasi.

Las Cascadas [Atlantic]: 17. Trichoprosopon (T.) wilsoni (Chagres Camp); 92. Culex (L.) allostigma; 123. Culex (Mel.) trachycampa; 149. Culex (Mochl.) hesitator.

Las Sabanas, near Ancón [Pacific]: 167. Corethrella blanda.

Lion Hill [Atlantic]: 58. Wyeomyia (D.) canfieldi.

Locality not specified: 10. Anopheles (N.) aquasalis; 12. Anopheles (N.) aquacaelestis (Atlantic side); 127. Culex (Mel.) iolambdis; 160. Culex (Carrol.) secundus; 169. Corethrella jenningsi.

Mandinga River [Atlantic]: 114. Culex (Mel.) dunni.

Margarita [Atlantic]: 43. Wyeomyia (W.) incana.

Matachin [Atlantic]: 172. Sayomyia festivus.

Miraflores [Pacific]: 18. Trichoprosopon (L.) espini (also Corozal and Culebra); 20. Trichoprosopon (C.) dicellaphora; 66. Wyeomyia (D.) eloisia; 157. Culex (A.) bifoliata.

Mojinga Swamp [Atlantic]: 108. Culex (Mel.) caribeanus; 113. Culex (Mel.) distinguendus; 120. Culex (Mel.) curryi; 129. Culex (Mel.) jubifer; 133. Culex (Mel.) haynei; 138. Culex (Mel.) pseudotaeniopus; 139. Culex (Mel.) quadri-foliatus.

Monte Lirio [Atlantic]: 174. Dixella lirio.

Tabernilla [Atlantic]: 15. Trichoprosopon (T.) trichorryes; 16. Trichoprosopon (T.) mogilasium; 22. Trichoprosopon (C.) culicivora; 23. Wyeomyia (W.) panamena; 24. Wyeomyia (W.) chrysomus; 25. Wyeomyia (W.) philophone; 27. Wyeomyia (W.) codiocampa; 29. Wyeomyia (W.) hosautos; 30. Wyeomyia (W.) symmachus; 31. Wyeomyia (W.) euethes; 35. Wyeomyia (W.) labesba; 38. Wyeomyia (W.) homothe; 39. Wyeomyia (W.) leucopisthepus; 41. Wyeomyia (W.) chresta; 48. Wyeomyia (D.) circumcincta; 53. Wyeomyia (D.) agyrtes; 54. Wyeomyia (D.) coenonus; 59. Wyeomyia (D.) agnostips; 67. Wyeomyia (D.) onidus; 68. Wyeomyia (D.) pantoia; 71. Limatus cacophrades; 73. Sabethes (Sabethinus) identicus; 76. Uranotaenia calosomata; 82. Orthopodomyia phyllozoa; 91. Haemagogus (H.) lucifer; 99. Culex (C.) delys; 102. Culex (C.) equivocator; 118. Culex (Mel.) egcymon; 122. Culex (Mel.) leprincei; 154. Culex (Micr.) gaudeator; 155. Culex (Micr.) jenningsi; 158. Culex (A.) corrigani.

Toro Point [Atlantic]: 96. Culex (C.) usquatissimus; 143. Culex (Mel.) epa-nastasis (Arenal River).

Trinidad River [Atlantic]: 132. Culex (Mel.) menytes; 144. Culex (Mel.) tecmarsis.

CHIRIQUI

Chiriquí Volcano region: 5. Anopheles (A.) chiriquiensis (elev. 6500 ft); 47. Wyeomyia (Davis.) arborea (Bijao, elev. 3000 ft); 80. Uranotaenia trapi-doi (El Hato, elev. 4500 ft); 101. Culex (C.) laticlasper (Cerro Punta, elev. 6500 ft); 153. Culex (Micr.) erethyzonfer (Palo Santo, elev. 4500 ft).

David: 77. Uranotaenia incognita.

COCLE

Tucué: 85. Aedes (F.) clarki.

COLON

Caldera Island, Portobelo Bay: 40. Wyeomyia (W.) abrachys; 42. Wyeomyia (W.) hapla; 52. Wyeomyia (D.) clasoleuca; 56. Wyeomyia (D.) jocosa; 90. Haemagogus (H.) chalcospilans; 170. Corethrella stonei.

Cascajal (Río): 104. Culex (C.) lepostenis.

Cativa: 111. Culex (Mel.) dysmathes.

Colón: 6. Anopheles (A.) punctimacula; 93. Culex (C.) chidesteri; 137. Culex (Mel.) psatharus; 142. Culex (Mel.) fur; 162. Deinocerites melanophylum.

Fort San Felipe, Portobelo Bay: 13. Anopheles (K.) neivai; 44. Wyeomyia (W.) simmsi; 45. Wyeomyia (W.) dymodora; 46. Wyeomyia (W.) roloncetta; 50. Wyeomyia (D.) andropus; 152. Culex (Micr.) daumastocampa.

Portobelo: 32. Wyeomyia (W.) melanopus; 65. Wyeomyia (D.) proviolans; 103. Culex (C.) elocutilis (Portobelo Bay, 2.5 mi from mouth of Cascajal River); 159. Culex (A.) chalcocorystes; 171. Lutzomiops pallida.

Puerto Pilón: 140. Culex (Mel.) quasihibridus.

Santa Rosa: 125. Culex (Mel.) flabellifer.

DARIEN

Patiño Point: 124. Culex (Mel.) fairchildi.

PANAMA, PROVINCE

Boquerón (Río): 37. Wyeomyia (W.) scotinomus; 49. Wyeomyia (D.) macrotus.

Cerro La Victoria: 147. Culex (Mochl.) arboricolus.

Chagres (Río): 7. Anopheles (A.) malefactor (upper part); 87. Aedes (F.) lithoecetor (between Alhajuela and San Juan).

Escondida (Quebrada), Pequení River: 126. Culex (Mel.) galindoi.

Juan Díaz: 119. Culex (Mel.) elephas; 136. Culex (Mel.) paracrybda.

La Victoria, Cerro Azul, 2100 ft: 36. Wyeomyia (W.) nigratubus.

Pacora: 128. Culex (Mel.) johnsoni; 130. Culex (Mel.) keenani.

Paitilla: 83. Aedes (O.) hastatus.

Panamá City: 4. Anopheles (A.) neomaculipalpus (east of; also Gatún, CZ); 150. Culex (Mochl.) rooti (a few miles east).

Pequení (Upper Río): 21. Trichoprosopon (C.) lampropos; 34. Wyeomyia (W.) rolonca (Juanita (Río), 2 miles up); 116. Culex (Mel.) appeteticus.

San Juan de Pequení: 55. Wyeomyia (D.) complosa.

Taboga Island: 81. Uranotaenia typhlosomata; 84. Aedes (O.) polyagrus; 97. Culex (C.) jubillator; 98. Culex (C.) revelator; 105. Culex (C.) proximus.

Tocumen: 79. Uranotaenia telmatophila.

PANAMA, REPUBLIC

Locality not specified: 11. Anopheles (N.) lloydi; 75. Mansonia (R.) nigricans; 95. Culex (C.) ousqua.

PUERTO RICO

List of Species

1. Toxorhynchites (Lynchiella) portoricensis (Roeder, 1885). TYPE: ♂, "Insula Portorico," no other data (LU). BIONOMICS: [Larvae in treeholes].

2. Aedes (Ochlerotatus) portoricensis (Ludlow, 1905) [= taeniorhynchus]. TYPE: Lectotype ♂, San Juan, 15 Aug 1905, L. G. de Queveda (USNM, 10007; selection of Stone and Knight 1956a: 224). BIONOMICS: [Larvae probably in brackish or freshwater pools near the sea].
3. Culex (C.) toweri Dyar & Knab, 1907 [= secutor]. TYPE: Holotype ♀, Mayaguez, Sept, W. V. Tower (USNM, 10222; see Stone and Knight 1957a: 57). BIONOMICS: Larvae in artificial containers [and probably also ground pools or treeholes].
4. Culex (Melanoconion) borinqueni Root, 1922 [= erraticus]. TYPE: Lectotype ♂, Río Piedras, 7 July 1921, F. M. Root (USNM; selection of Stone and Knight 1957a: 44). BIONOMICS: Larvae in all sorts of ditches, slow streams, pools and marshy places.
5. Culex (Mel.) sardinerae Fox, 1953. TYPE: Holotype ♀ with associated pupal skin and genitalia mount, Finca Sardinera, Dorado, 9 Apr 1952, I. Fox (STMPR). BIONOMICS: [Larvae probably in ground waters].
6. Corethrella tripunctata Lane, 1942. TYPE: Holotype ♂, Carolina, elev. 100 ft, Sept, C. Ludlow (USNM). BIONOMICS: Larvae in crabholes under rocks.
7. Dixella hoffmani (Lane, 1942). TYPE: Holotype ♀, Pueblo Viejo, 2 Nov 1935, W. A. Hoffman (USNM). BIONOMICS: [Larvae probably in vegetation in stream margins, lakes, ponds or swamps].

List of Localities

Carolina: 6. Corethrella tripunctata.
 Dorado, Finca Sardinera: 5. Culex (Mel.) sardinerae.
 Mayaguez: 3. Culex (C.) toweri.
 Pueblo Viejo: 7. Dixella hoffmani.
 Puerto Rico, no locality specified: 1. Toxorhynchites (L.) portoricensis.
 Río Piedras: 4. Culex (Mel.) borinqueni.
 San Juan: 2. Aedes (O.) portoricensis.

ST. LUCIA

List of Species

- *1. Wyeomyia (W.) grayii Theobald, 1901 [= pertinans]. TYPE: ♀, Castries, Flore Farm, Piton [Trois Pitons ?], elev. 1000 ft, 25 Dec 1899, St. George Gray; also from Grenada (BM). BIONOMICS: [Larvae probably in bromeliads]. Some of the adults of the type series were taken at 1400 hrs at above mentioned farm.
2. Uranotaenia lowii Theobald, 1901. TYPE: 2 ♀, cemetery at St. Lucia (Castries ?), Feb, G. C. Low (BM). BIONOMICS: Larvae taken in a pool at the cemetery.
3. Psorophora (Janthinosoma) terminalis (Coquillett, 1906) [= ferox]. TYPE: Adults, St. Lucia (BM). BIONOMICS: [Larvae probably in temporary rainpools in wooded areas].
4. Aedes (Stegomyia) luciensis (Theobald, 1901) [= aegypti]. TYPE: ♂, ♀, St. Lucia, no other data; also from British Guiana (BM). BIONOMICS: [Larvae in artificial containers].
5. Culex (C.) scholasticus Theobald, 1901 [= inflictus]. TYPE: ♂, ♀, St.

Lucia, 21 Dec 1899, Otho Galgey; also from Grenada and St. Vincent (BM). BIONOMICS: [Larvae possibly in crabholes].

6. Culex (C.) nigripalpus Theobald, 1901. TYPE: Holotype ♂, St. Lucia, date not specified, G. C. Low (NE ?). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

*7. Deinocerites magnus (Theobald, 1901). TYPE: Holotype ♂, St. Lucia, date not specified, G. C. Low (NE). BIONOMICS: [Larvae in crabholes].

List of Localities

No specific localities are given for any species described from St. Lucia except for 1. Wyeomyia (W.) grayii; presumably all species were collected at or near Castries.

ST. VINCENT

List of Species

*1. Trichoprosopon (Isostomyia) perturbans (Williston, 1896). TYPE: 8 ♂ and ♀, St. Vincent, H. H. Smith (BM). BIONOMICS: [Larvae in bromeliads, *Aechmaea*, *Guzmania*].

2. Wyeomyia (W.) pertinans (Williston, 1896). TYPE: 6 ♂ and ♀, St. Vincent, sea level and 1000 ft, H. H. Smith (BM). BIONOMICS: [Larvae in bromeliads].

*3. Haemagogus (H.) splendens Williston, 1896. TYPE: 1 ♂, 7 ♀, St. Vincent, 1000 ft, H. H. Smith (BM). BIONOMICS: [Larvae in treeholes].

4. Culex (C.) scholasticus Theobald, 1901 [= inflictus]. TYPE: ♂, ♀, Cumberland Bay and Richmond Estate Works (111), 10 June 1899, H. Powell; also from Grenada and St. Lucia (BM). BIONOMICS: [Larvae possibly in crabholes].

5. Culex (C.) palus Theobald, 1903 [= nigripalpus]. TYPE: ♀, marsh behind Kingstown, G. C. Low; also ♂ from Barbados (BM). BIONOMICS: Larvae in a marsh.

6. Dixella clavulus (Williston, 1896). TYPE: 4 ♂, St. Vincent, H. H. Smith (BM). BIONOMICS: [Larvae probably on edges of very small streams, possibly in vegetation on edges of larger streams and ground pools].

List of Localities

The species described from St. Vincent Island are all from unspecified localities except for 4. Culex (C.) scholasticus and 5. Culex (C.) palus (see).

SURINAM

List of Species

1. Chagasia bonneae Root, 1927. TYPE: Holotype ♂ (626) with associated larval and pupal skins, Dam (Suriname), date not specified, BBW (USNM). BIONOMICS: [Larvae probably along margins of flowing streams].

2. Anopheles (A.) bonnei Fonseca & Ramos, 1939. TYPE: This nominal

species was proposed for mediopunctatus of Bonne and Bonne-Wepster (1925) from Surinam, no specimens were seen; a lectotype (or neotype ?) should be designated; the species occurs in Surinam along the coast and in the interior. BIONOMICS: Larvae in small pools in woods.

3. Toxorhynchites (Lynchiella) aldrichanus (Bonne-Wepster and Bonne, 1920) [= bambusicolus]. TYPE: 2 ♀, Dam (Suriname), Jan 1919, BBW (ITH). BIONOMICS: Larvae in terrestrial bromeliads.

4. Toxorhynchites (L.) guianensis (Bonne-Wepster & Bonne, 1920) [= gueloupensis]. TYPE: Holotype ♀, Kwakoepron (Saramacca), date not specified, BBW (ITH). BIONOMICS: [Larvae probably in bromeliads].

5. Toxorhynchites (L.) moengoensis (Bonne-Wepster & Bonne, 1923) [= theobaldi]. TYPE: ♂, ♀, Moengo (Marowijne), date not specified, BBW (ITH). BIONOMICS: Larvae in leaf axils of Heliconia and Phenakospermum.

*6. Wyeomyia (W.) aphobema Dyar, 1918. TYPE: Holotype ♂, Lawa River (Marowijne), Mar 1917, BBW (USNM, 21915). BIONOMICS: Larvae in bromeliads.

7. Wyeomyia (W.) fallax Bonne-Wepster & Bonne, 1919 [= oblita]. TYPE: ♀, Paramaribo (Suriname), Dec 1916, BBW (LU). BIONOMICS: Larvae in bromeliads.

*8. Wyeomyia (Dendromyia) albosquamata Bonne-Wepster & Bonne, 1919. TYPE: Holotype ♂ (3550), Lawa River (Marowijne), Mar 1917, BBW (ITH). BIONOMICS: Larvae in bromeliads.

9. Wyeomyia (D.) argenteorostris (Bonne-Wepster & Bonne, 1919). TYPE: Holotype ♂, Lawa River (Marowijne), Mar 1917, BBW (ITH). BIONOMICS: Larvae in bromeliads.

10. Wyeomyia (D.) flui (Bonne-Wepster & Bonne, 1920) [= confusa]. TYPE: ♀, Albina (Marowijne), Apr 1917, Dam (Suriname), Jan 1919, BBW (ITH). BIONOMICS: [Larvae probably in leaf axils of Musaceae or Araceae]. Adults captured landing in the woods.

11. Wyeomyia (D.) lamellata (Bonne-Wepster & Bonne, 1920). TYPE: Holotype ♂, placer of Cie des Mines d'Or, Lawa River (Marowijne), date not specified, BBW (ITH). BIONOMICS: Larvae in bromeliads.

*12. Wyeomyia (D.) occulta Bonne-Wepster & Bonne, 1919. TYPE: Holotype ♂, sandy district (Suriname), Mar 1918, BBW (ITH). BIONOMICS: Larvae in leaf axils of Heliconia.

13. Wyeomyia (D.) roucouyana (Bonne-Wepster & Bonne, 1920). TYPE: Holotype ♀, Lawa River (Marowijne), Mar 1917, BBW (ITH). BIONOMICS: [Larvae in epiphytic bromeliads].

14. Wyeomyia (D.) surinamensis Bruijning, 1959. TYPE: Holotype ♂, Ornamibo (Suriname), 11 Aug 1954, C. F. A. Bruijning (LM). BIONOMICS: [Larvae probably in bromeliads].

15. Phoniomyia splendida (Bonne-Wepster & Bonne, 1919). TYPE: ♂, ♀, larva, pupa; sandy district (Suriname), Mar 1918; Lawa River (Marowijne), Mar 1917; Sarah [Sara] Creek (Marowijne), Jan 1919, BBW (ITH). BIONOMICS: Larvae in bromeliads.

16. Limatus pseudomethysticus (Bonne-Wepster & Bonne, 1920). TYPE: ♀, locality and other data not specified, BBW (ITH). BIONOMICS: Larvae in fallen palm leaves and in treeholes.

17. Sabethes (S.) kappleri Bonne, 1923 [= amazonicus]. TYPE: Holotype ♀, Moengo (Marowijne), Feb 1923, C. Bonne (NE, destroyed by molds). BIONOMICS: [Larvae probably in treeholes or bamboo]. Holotype captured in the woods in the daytime.

18. Sabethes (Sabethoides) imperfectus (Bonne-Wepster & Bonne, 1920) [= chloropterus]. TYPE: Holotype ♀, Dam (Suriname), Jan 1919, BBW (ITH). BIONOMICS: [Larvae probably in treeholes and bamboo internodes with small lateral opening; bamboo traps with small lateral holes should be used. Females captured biting in woods].

19. Psorophora (Janthinosoma) vanhalli (Dyar & Knab, 1906) [= ferox]. TYPE: Holotype ♂, Paramaribo (Suriname), date not specified, Van Hall (USNM, 9967; see Stone and Knight 1955: 286-287). BIONOMICS: [Larvae probably in temporary ground pools in wooded areas].

20. Aedes (Ochlerotatus) eucephalaeus Dyar, 1918. TYPE: Lectotype ♂ (D) with associated larval and pupal skins (B) and genitalia slide (971), Zanderij I (Suriname), 12-20 Mar 1918, BBW (USNM, 21911; selection of Stone and Knight 1956a: 217). BIONOMICS: Larvae in temporary rainpools in the woods in sandy land; lie on backs on bottom of pools.

21. Aedes (Finlaya) argyrothorax Bonne-Wepster & Bonne, 1920. TYPE: Holotype ♂, Geiersvlijt, an estate near Paramaribo (Suriname), date not specified, BBW (ITH; see Stone and Knight 1956a: 214). BIONOMICS: Larvae probably in treeholes]. Holotype captured near a treehole.

22. Aedes (Howardina) arborealis Bonne-Wepster & Bonne, 1920. TYPE: ♂, ♀, larva Dam (Suriname), Jan 1919, BBW (ITH; not in USNM as stated in Stone Knight and Starcke 1959: 173). BIONOMICS: Larvae in a treehole in a small tree fallen over a small creek.

23. Culex (C.) bonneae Dyar & Knab, 1919. TYPE: Lectotype ♂ with genitalia slide (822), Cie des Mines d'Or, Lawa River (Marowijne), Mar 1917, BBW (USNM, 21646; selection of Stone and Knight 1957a: 44). BIONOMICS: Larvae in a water barrel, a very dirty puddle and a treehole.

24. Culex (C.) brevispinosus Bonne-Wepster & Bonne, 1920. TYPE: ♂, ♀, larva; Kabelstation (Suriname), Dec 1918; Kwakoe Gron (Saramacca), Mar 1919; BBW (ITH). BIONOMICS: Larvae in an old boat on the bank of the Suriname River and in a small ground pool.

25. Culex (C.) usquatus Dyar, 1918 [= coronator]. TYPE: Lectotype ♂ with genitalia slide (967); Marowijne and Lawa rivers (Marowijne), Feb 1917; Suriname River (Suriname), Feb 1918; BBW (USNM; selection of Stone and Knight 1957a: 57). BIONOMICS: Larvae in old boats, very dirty puddles, water barrels, and in a fallen, nearly burned tree.

26. Culex (C.) aikenii Dyar & Knab, 1908; lachrimans Dyar & Knab, 1909, new name [= pipiens quinquefasciatus]. TYPE: Lectotype ♂ (F6) with genitalia slide, Nieuw Amsterdam (Commewijne), 17 Feb 1908, J. Aiken (USNM, 11977; selection of Stone and Knight 1957a: 42). BIONOMICS: Larvae probably in ground pools contaminated with domestic wastes or in artificial containers].

27. Culex (C.) surinamensis Dyar, 1918. TYPE: Holotype ♂ (21) with associated larval and pupal skins and genitalia slide (975), Lawa River (Marowijne), Mar 1917, BBW (USNM, 21912; selection of Stone and Knight 1957a: 56). BIONOMICS: Larvae in rockpools in Lawa River and in a water barrel.

28. Culex (Melanoconion) albinensis Bonne-Wepster & Bonne, 1920. TYPE: ♂, ♀, larvae, near Paramaribo (Suriname), 1919, BBW (LU). BIONOMICS: Larvae in ground pools.

29. Culex (Mel.) maroniensis Bonne-Wepster & Bonne, 1920 [= albinensis]. TYPE: Holotype ♂, specific locality unknown, BBW (ITH). BIONOMICS: [Larvae probably in ground pools].

30. Culex (Mel.) alcocci Bonne-Wepster & Bonne, 1920. TYPE: ♂, ♀,

larva, Zanderij I (Suriname), 1 Mar 1918, BBW (ITH). BIONOMICS: Larvae in temporary pools in the woods.

31. Culex (Mel.) vapulans Dyar, 1920 [= bastagarius]. TYPE: Lectotype ♂ (BB 30) with genitalia slide, near Paramaribo (Suriname), date not specified, BBW (USNM, 22738; selection of Rozeboom and Komp 1950: 88). BIONOMICS: Larvae in a ground pool.

32. Culex (Mel.) xivylis Dyar, 1920 [= bastagarius]. TYPE: Holotype ♂ (BB714c) with genitalia slide, interior of colony (Suriname), 24 Jan 1919, BBW (USNM, 22747; see Rozeboom and Komp 1950: 92 and Stone and Knight 1957a: 58). BIONOMICS: Larvae in ground pool.

33. Culex (Mel.) commevynensis Bonne-Wepster & Bonne, 1920. TYPE: Holotype ♂, Alkamaar (Commewijne), Mar 1919, BBW (ITH). BIONOMICS: Larvae in a ditch.

34. Culex (Mel.) comminator Dyar, 1920. TYPE: Holotype ♂ with genitalia slide, interior of colony (Suriname), May 1919, BBW (USNM, 22739). BIONOMICS: Larvae in ground pool.

35. Culex (Mel.) confundior Komp & Rozeboom, 1951. TYPE: Holotype ♂ genitalia slide (M 94 P 2), near Paramaribo (Suriname), probably 1918, BBW (USNM, 59876). BIONOMICS: Larvae in a ground pool.

36. Culex (Mel.) copenamensis Bonne-Wepster & Bonne, 1920. TYPE: Holotype ♂, Kabelstation (Suriname), May 1919, BBW (ITH). BIONOMICS: Larvae in ground pool.

37. Culex (Mel.) corentynensis Dyar, 1920. TYPE: Lectotype ♂ with genitalia slide (BB 643), probably Corantijn River (Nickerie), 12 Jan 1919, BBW (USNM, 22737; selection of Rozeboom and Komp 1950: 89). BIONOMICS: Pupae in ground pools.

38. Culex (Mel.) eastor Dyar, 1920. TYPE: Holotype ♂, coastal region (Suriname), Feb 1917, BBW (USNM, 22740). BIONOMICS: Pupa in swamp.

39. Culex (Mel.) vaxus Dyar, 1920 [= educator]. TYPE: Holotype ♂ (BB II 671) with genitalia slide, interior of colony (Suriname), 18 Jan 1919, BBW (USNM, 22743; see Stone and Knight 1957a: 58; in our opinion Dyar designated a holotype). BIONOMICS: Larva in a ditch.

40. Culex (Mel.) bibulus Dyar, 1920 [= educator]. TYPE: Holotype ♂, interior of colony (Suriname), 24 Jan 1919, BBW (USNM, 22744). BIONOMICS: Larvae in ground pool.

41. Culex (Mel.) idottus Dyar, 1920. TYPE: Holotype ♂, interior of colony (Suriname), Jan 1919, BBW (USNM, 22745). BIONOMICS: Larvae in a ditch.

42. Culex (Mel.) maxinocca Dyar, 1920. TYPE: Lectotype ♂ (BB 971) with genitalia slide, interior of colony (Suriname), May 1919, BBW (USNM, 22741; selection of Rozeboom and Komp 1950: 92). BIONOMICS: Larvae in ground pool.

43. Culex (Mel.) tosimus Dyar, 1920 [= maxinocca]. TYPE: Holotype ♂, interior of colony (Suriname), 18 Dec 1918, BBW (USNM, 22742). BIONOMICS: Larvae in a pool in the woods.

44. Culex (Mel.) nicceriensis Bonne-Wepster & Bonne, 1920. TYPE: ♂, ♀, larvae, Kabelstation (Suriname), Dec 1918 and May 1919, BBW (ITH). BIONOMICS: Larvae in ground pools.

45. Culex (Mel.) phlabistus Dyar, 1920. TYPE: Holotype ♂, interior of colony (Suriname), May 1919, BBW (USNM, 22736). BIONOMICS: Pupa in ground pool.

46. Culex (Mel.) phlogistus Dyar, 1920. TYPE: Holotype ♂, interior of colony (Suriname), May 1919, BBW (USNM, 22735). BIONOMICS: Larvae in pools in woods.

47. Culex (Mel.) saramaccensis Bonne-Wepster & Bonne, 1920. TYPE: ♂, ♀, larva, Suriname River, Kabelstation (Suriname), Dec 1918, BBW (ITH). BIONOMICS: Larvae in rockpools.

48. Culex (Mel.) terebor Dyar, 1920. TYPE: Holotype ♂ genitalia (BB 232), locality not specified, 20 July 1917, BBW (USNM, 22733). BIONOMICS: Larvae in pool in stream bed.

49. Culex (Mel.) westeriae Komp & Rozeboom, 1951. TYPE: Holotype ♂ genitalia (BB 366), near Paramaribo (Suriname), 5 Dec 1918, BBW (USNM, 59872). BIONOMICS: Pupa in pool with Pistia and other vegetation.

50. Culex (Mel.) ybarmis Dyar, 1920. TYPE: Holotype ♂ with associated larval skin, near Paramaribo (Suriname), date not specified, BBW (USNM, 22734). BIONOMICS: Larva in ground pool.

51. Culex (Mel.) jonistes Dyar, 1920 [= ybarmis]. TYPE: Holotype ♂, interior of colony (Suriname), Jan 1919, BBW (USNM, 22745). BIONOMICS: Larvae in ditch.

52. Culex (Mel.) ensiformis Bonne-Wepster & Bonne, 1920 [= zeteki]. TYPE: ♂, ♀, larva; Kabelstation (Suriname), Dec 1918; Dam (Suriname), Jan 1919; BBW (ITH). BIONOMICS: Larvae in grassy, more or less permanent pools.

53. Culex (Mochlostyrax) alogistus Dyar, 1918. TYPE: Lectotype ♂ (972 F) with genitalia slide, associated larval skin apparently lost, ? Zanderij I (Suriname), Mar 1918, BBW (USNM, 21914; selection of Rozeboom and Komp 1950: 87; see Stone and Knight 1957a: 42). BIONOMICS: Larvae lying on backs in bottom of temporary pools in woods.

54. Culex (Mochl.) multispinosus Bonne-Wepster & Bonne, 1920 [= caudelli]. TYPE: Holotype ♂ with genitalia slide (Gf 41/22), Kabelstation (Suriname), May 1919, BBW (ITH; see Komp and Rozeboom 1951: 122). BIONOMICS: Larvae in permanent ground pools.

55. Culex (Mochl.) foliafer Komp & Rozeboom, 1951. TYPE: Holotype ♂ genitalia (H) with associated larval and pupal skins, locality and date not specified, BBW (USNM, 59869). BIONOMICS: [Larvae probably in ground pools].

56. Culex (Mochl.) curopinensis Bonne-Wepster & Bonne, 1920 [= pilosus]. TYPE: Holotype ♂, locality and date not specified, BBW (ITH). BIONOMICS: [Larvae common throughout the year in more or less permanent ground pools].

57. Culex (Microculex) chryselatus Dyar & Knab, 1919. TYPE: Lectotype ♂ (23) with genitalia slide (885) and nonassociated larval and pupal skins, Cie des Mines d'Or, Lawa River (Marowijne), Mar 1917, BBW (USNM, 21647). BIONOMICS: Larvae in epiphytic bromeliads.

*58. Culex (Eubonnea) tapena Dyar, 1919 [= amazonensis]. TYPE: Holotype ♂, Paramaribo (Suriname), 5 Jan 1919, BBW (USNM, 22623). BIONOMICS: Larvae in permanent pool with much vegetation.

59. Culex (Carrollia) bonnei Dyar, 1921. TYPE: Lectotype ♂, ? Gansee (Suriname), date not specified, BBW (USNM, 24882; selection of Stone and Knight 1957a: 44). BIONOMICS: Larvae in an old kerosene tin in village.

60. Culex (Carrol.) infolatus Bonne-Wepster & Bonne, 1920. TYPE: Holotype ♂, Dam (Suriname), Jan 1919, BBW (ITH). BIONOMICS: Larvae in a hole in a green and still living tree fallen across a small creek.

List of Localities

COMMEWIJNE

Alkmaar: 33. Culex (Mel.) commevynensis.

Nieuw Amsterdam: 26. Culex (C.) aikenii.

MAROWIJNE

Albina: 10. Wyeomyia (D.) flui.

Lawa River, probably primarily around placer mines of Companie des Mines d'Or: 6. Wyeomyia (W.) aphobema; 8. Wyeomyia (D.) albosquamata; 9. Wyeomyia (D.) argenteorostris; 11. Wyeomyia (D.) lamellata (Cie des Mines d'Or); 13. Wyeomyia (D.) roucouyana; 15. Phoniomyia splendida; 23. Culex (C.) bonneae (Cie des Mines d'Or); 25. Culex (C.) usquatus; 27. Culex (C.) surinamensis; 57. Culex (Micr.) chryselatus (Cie des Mines d'Or).

Marowijne River: 25. Culex (C.) usquatus.

Moengo: 5. Toxorhynchites (L.) moengoensis; 17. Sabethes (S.) kappleri.

Sara (Sarah) Creek: 15. Phoniomyia splendida.

NICKERIE

Corantijn River: 37. Culex (Mel.) corentynensis.

SARAMACCA

Kwakoeegron: 4. Toxorhynchites (L.) guianensis; 25. Culex (C.) usquatus.

SURINAME

Dam: 1. Chagasia bonneae; 3. Toxorhynchites (L.) aldrichanus; 18. Sabethes (Sabethoides) imperfectus; 22. Aedes (H.) arborealis; 60. Culex (Carrol.) infoliatulus.

Gansee: 59. Culex (Carrol.) bonnei.

Kabelstation: 24. Culex (C.) brevispinosus; 36. Culex (Mel.) copennensis; 44. Culex (Mel.) nicceriensis; 47. Culex (Mel.) saramaccensis (Surinam River); 52. Culex (Mel.) ensiformis; 54. Culex (Mochl.) multispinosus.

Ornamibo: 14. Wyeomyia (D.) surinamensis.

Paramaribo and vicinity: 7. Wyeomyia (W.) fallax; 19. Psorophora (J.) vanhalli; 21. Aedes (F.) argyrothorax (Geiersvliet estate); 28. Culex (Mel.) albinensis; 31. Culex (Mel.) vapulans; 35. Culex (Mel.) confundior; 49. Culex (Mel.) wepsterae; 50. Culex (Mel.) ybarmis; 58. Culex (Eub.) tapena.

Surinam coast, locality not specified: 38. Culex (Mel.) eastor.

Surinam, general, locality not specified, probably Paramaribo and vicinity: 2. Anopheles (A.) bonnei; 16. Limatus pseudomethysticus; 29. Culex (Mel.) maroniensis; 37. Culex (Mel.) corentynensis; 48. Culex (Mel.) terebor; 53. Culex (Mochl.) alogistus; 55. Culex (Mochl.) foliafer; 56. Culex (Mochl.) curopinensis; 59. Culex (Carrol.) bonnei.

Surinam, interior of colony; no localities specified but probably Dam, Kabelstation, Zanderij I and other localities along railroad are indicated: 32. Culex (Mel.) xivylis; 34. Culex (Mel.) comminator; 39. Culex (Mel.) vaxus; 40. Culex (Mel.) bibulus; 41. Culex (Mel.) idottus; 42. Culex (Mel.) maxinocca; 43. Culex (Mel.) tosimus; 45. Culex (Mel.) phlabistus; 46. Culex (Mel.) phlogistus; 51. Culex (Mel.) jonistes.

Surinam, sandy district: 12. Wyeomyia (D.) occulta; 15. Phoniomyia splendida.

Surinam River: 25. Culex (C.) usquatus.

Zanderij I: 20. Aedes (O.) eucephalaeus; 30. Culex (Mel.) alcocci; 53. Culex (Mochl.) alogistus.

TOBAGO

List of Species

1. Culex (Melanoconion) decorator Dyar & Knab, 1906. TYPE: Larvae (53), locality not specified, May 1905, A. Busck (USNM; lost, see Stone and Knight 1957a: 47). BIONOMICS: Larvae in bamboo internodes.

TRINIDAD

List of Species

1. Anopheles (Kerteszia) bellator Dyar & Knab, 1906. TYPE: Lectotype ♂ (44.1) with associated pupal skin, genitalia slide (314) and slide of front tarsus (659), Pitch Lake, La Brea (St. Patrick), 8 July 1905, A. Busck (USNM, 10027; selection of Stone and Knight 1956b: 226). BIONOMICS: Larva in "leaf axil of century plant growing on pitch lake," probably a terrestrial bromeliad.

2. Toxorhynchites (Lynchiella) superbus (Dyar & Knab, 1906) [ssp. of haemorrhoidalis]. TYPE: Holotype ♂ (16-9) with genitalia slide, Sangre Grande (St. Andrew), F. W. Urich (USNM, 9957; see Stone and Knight 1957c: 200). BIONOMICS: [Larvae in epiphytic bromeliads].

3. Toxorhynchites (L.) iris (Knab, 1913) [= mariae]. TYPE: Holotype ♀, locality not specified, F. W. Urich (USNM, 15603). BIONOMICS: Larva in an epiphytic bromeliad.

4. Toxorhynchites (L.) trinidadensis (Dyar & Knab, 1906) [= theobaldi]. TYPE: Holotype ♀ (B 3.2), Sangre Grande (St. Andrew) or San Juan (St. George), date not specified, F. W. Urich (USNM, 9954; see Stone and Knight 1957c: 200). BIONOMICS: Larvae in treeholes.

*5. Trichoprosopon (T.) nivipes Theobald, 1901 [= digitatum]. TYPE: ♂, ♀, Agua Santa (St. George), Dec, F. W. Urich (LU). BIONOMICS: [Larvae probably in cacao pod shells on the ground].

6. Trichoprosopon (Runchomyia) rapax (Dyar & Knab, 1906) [= frontosum]. TYPE: Lectotype ♂, Arima (St. George), F. W. Urich (USNM, 9981; selection of Howard, Dyar and Knab 1915: 166 and Stone 1944: 335). BIONOMICS: Larvae in bromeliads.

7. Wyeomyia (W.) bromeliarum Dyar & Knab, 1906 [= arthrostigma]. TYPE: Lectotype larval skin with associated pupal skin both mounted on a slide and associated fragmentary adult, San Juan (St. George), F. W. Urich (USNM, 9989; selection of Stone and Knight 1957b: 121). BIONOMICS: Larvae in bamboo joints.

*8. Wyeomyia (W.) drapetes Dyar & Knab, 1909 [= arthrostigma]. TYPE: ♂, ♀, near railroad station, San Juan (St. George), June 1905, A. Busck (USNM, 12181; the lectotype designation of Stone and Knight 1957b: 122 does not seem to be valid for no specimens collected by F. W. Urich are mentioned in the original description; however, it is possible that an error in labeling has occurred). BIONOMICS: Larvae in bamboo stump with Sabethes undosus (Busck 41).

*9. Wyeomyia (W.) abascanta (Dyar & Knab, 1908) [= medioalbipes]. TYPE: Lectotype ♀, Pitch Lake, La Brea (St. Patrick), 8 July 1905, A. Busck (USNM, 11983; selection of Stone and Knight 1957b: 120). BIONOMICS: Larvae in "leaf axils of century plant growing on pitch lake," probably a terrestrial bromeliad.

10. Wyeomyia (W.) telestica Dyar & Knab, 1906. TYPE: Holotype ♂ (B 12-3) with associated pupal skin, the larval skin apparently lost, locality and date not specified, F. W. Urich (USNM, 9985; selection of Stone and Knight 1957b: 126). BIONOMICS: Larvae in epiphytic bromeliads.
11. Wyeomyia (Dendromyia) autocratica Dyar & Knab, 1906. TYPE: Holotype ♂ (B 12-8) with associated pupal skin and genitalia mount, larval skin apparently lost, locality and date not specified, F. W. Urich (USNM, 9986; see Stone and Knight 1957b: 121). BIONOMICS: Larvae in epiphytic bromeliads.
12. Wyeomyia (D.) melanocephala Dyar & Knab, 1906. TYPE: Holotype ♀, locality not specified, June 1905, A. Busck (USNM, 9998). BIONOMICS: [Larvae in leaf axils of Araceae].
13. Wyeomyia (D.) pseudopecten Dyar & Knab, 1906. TYPE: Holotype ♂ (31), Montserrat (Caroni), 28 June 1905, A. Busck (USNM, 9997; see Stone and Knight 1957b: 125). BIONOMICS: Larvae in red flower bracts of Heliconia.
14. Wyeomyia (D.) cara Dyar & Knab, 1909 [= pseudopecten]. TYPE: Holotype ♀, locality not specified, June 1905, A. Busck (USNM, 12182). BIONOMICS: [Larvae probably in flower bracts of Heliconia].
15. Phoniomyia lassalli (Bonne-Wepster & Bonne, 1921). TYPE: ♂, ♀, larva, Sangre Grande (St. Andrew) and Port-of-Spain (St. George), F. W. Urich; Bonne-Wepster and Bonne proposed this nominal species for trinidensis of Dyar and Knab 1906, Howard, Dyar and Knab 1915, and Dyar 1919; they did not specify any type material but stated "The specific name trinidensis must be dropped for Dyar and Knab's specimens and we propose the name Dyarina lassalli, new species"; therefore we consider these specimens as syntypes of lassalli (USNM). BIONOMICS: Larvae in bromeliads.
16. Phoniomyia trinidensis (Theobald, 1901). TYPE: ♀, locality not specified, F. W. Urich (BM). BIONOMICS: [Larvae in bromeliads].
17. Sabethes (S.) goeldii Howard, Dyar & Knab, 1915 [= belisarioi]. TYPE: Holotype ♀, locality not specified, F. W. Urich (USNM, 19640). BIONOMICS: [Larvae probably in treeholes or bamboo with small lateral opening].
18. Sabethes (Sabethinus) undosus (Coquillett, 1906). TYPE: Holotype ♀ (B 3.6), locality not specified, F. W. Urich (USNM, 8292; see Stone and Knight 1957b: 118). BIONOMICS: [Larvae in bamboo internodes].
19. Psorophora (P.) saeva Dyar & Knab, 1906 [= lineata]. TYPE: Holotype ♀ (B 4-1), locality not specified, F. W. Urich (USNM, 9964; see Stone and Knight 1955: 286). BIONOMICS: [Larvae probably in open grassy temporary pools].
20. Psorophora (Janthinosoma) albipes (Theobald, 1907). TYPE: ♀, Agua Santa (St. Andrew), Dec, F. W. Urich (BM). BIONOMICS: [Larvae in temporary ground pools, probably in wooded areas].
21. Psorophora (Grabhamia) indoctum (Dyar & Knab, 1906) [= cingulata]. TYPE: Holotype ♂ (17.3) with associated pupal skin, Cedros (St. Patrick), 14 June 1905, A. Busck (USNM, 10026; see Stone and Knight 1955: 285). BIONOMICS: Larvae in rainwater pool.
22. Aedes (Ochlerotatus) hortator Dyar & Knab, 1907. TYPE: Holotype ♀, Arima (St. George), date not specified, F. W. Urich (USNM, 10250; see Stone and Knight 1956a: 219). BIONOMICS: [Larvae in temporary ground pools].
23. Aedes (O.) oligopistus Dyar, 1918. TYPE: Holotype ♂, locality not specified, June 1905, A. Busck (USNM, 21550). BIONOMICS: [Larvae probably in temporary ground pools].
- *24. Aedes (O.) serratus (Theobald, 1901). TYPE: ♂, ♀, locality not specified, F. W. Urich; also from Brazil and British Guiana (BM). BIONOMICS: [Larvae in temporary rainpools and overflows of ponds and lakes, often in the shade].

25. Aedes (Finlaya) insolita (Coquillett, 1906) [= terrens]. TYPE: Holotype ♀, locality not specified, F. W. Urich (USNM, 9142). BIONOMICS: [Larvae probably in treeholes].

26. Aedes (F.) laternaria (Coquillett, 1906) [= terrens]. TYPE: Holotype ♂ (34), Montserrat (Caroni), June 1905, A. Busck (USNM, 8290; see Stone and Knight 1956a: 220). BIONOMICS: Larvae in treehole in immortelle tree near houses.

27. Aedes (Howardina) palliatus (Coquillett, 1906) [= fulvithorax]. TYPE: Holotype ♀, locality not specified, F. W. Urich (USNM, 9140). BIONOMICS: [Larvae probably in treeholes].

28. Aedes (H.) ioliota Dyar & Knab, 1913. TYPE: Holotype ♀, locality not specified, F. W. Urich (USNM, 16000). BIONOMICS: Larvae in treeholes.

29. Aedes (H.) sexlineatus (Theobald, 1901). TYPE: Holotype ♀ (102), Agua Santa (St. George), F. W. Urich (BM). BIONOMICS: [Larvae in epiphytic bromeliads].

30. Haemagogus (Stegoconops) janthinomys Dyar, 1921 [= spegazzinii or ssp. of capricornii]. TYPE: Lectotype ♂ (17-1) with associated larval skin and genitalia slide (219), St. Ann's, Port-of-Spain (St. George), F. W. Urich (USNM, 24335; selection of Stone and Knight 1955: 288). BIONOMICS: Larvae in treeholes.

31. Culex (C.) basilicus Dyar & Knab, 1906 [= corniger]. TYPE: Lectotype ♀ (26-10), Arima (St. George), F. W. Urich (USNM, 10021; selection of Stone and Knight 1957a: 43-44). BIONOMICS: Larvae in a tub near a kitchen.

32. Culex (C.) coronator Dyar & Knab, 1906. TYPE: Lectotype larval skin (7.2) with associated pupal skin and ♂, St. Joseph (St. George), 12 June 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 46). BIONOMICS: Larvae in a pool in the woods.

33. Culex (C.) declarator Dyar & Knab, 1906. TYPE: Lectotype larval skin (21.1) with associated pupal skin, ♂ and genitalia slide (268), south coast (St. Patrick), 20 June 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 47). BIONOMICS: Larvae in a lagoon pool of dirty, ill-smelling water distant from habitations.

34. Culex (C.) inquisitor Dyar & Knab, 1906 [= declarator]. TYPE: Lectotype larval skin (29.1) with associated pupal skin and ♀, Montserrat (Caroni), 27 June 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 51). BIONOMICS: Larvae in a manure ditch behind stable.

35. Culex (C.) extricator Dyar & Knab, 1906 [= inflictus]. TYPE: Larvae (27) and 1 ♀ (27 xx) with associated larval skin, Cedros (St. Patrick), 23 June 1905, A. Busck (USNM; see Stone and Knight 1957a: 49). BIONOMICS: Larvae in a bucket used to keep live crabs.

36. Culex (C.) mollis Dyar & Knab, 1906. TYPE: Lectotype ♂ (27.4) with associated fragmentary larval and pupal skins and genitalia slide (233), Sangre Grande (St. Andrew), Sept 1906, F. W. Urich (USNM, 10022; selection of Stone and Knight 1957a: 53). BIONOMICS: Larvae in a hollow tree.

37. Culex (C.) biocellatus Theobald, 1903 [= nigripalpus]. TYPE: Holotype ♀, locality not specified, C. H. Hewlett (BM; see Stone 1957, Ent. Soc. Wash., Proc. 58: 340). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

38. Culex (C.) barbarus Dyar & Knab, 1906 [= pipiens quinquefasciatus]. TYPE: Holotype ♀ (21.3 or 21.5) with associated larval and pupal skins, south coast (St. Patrick), 20 June 1905, A. Busck (USNM). BIONOMICS: Larvae in a lagoon pool of dirty ill-smelling water far from habitations.

*39. Culex (Melanoconion) atratus Theobald, 1901. TYPE: ♂, ♀, locality not specified, F. W. Urich; also from Jamaica (BM). BIONOMICS: [Larvae probably in permanent and semi-permanent ground waters, including pools in mangrove swamps].

40. Culex (Mel.) bastagarius Dyar & Knab, 1906. TYPE: Lectotype ♂ with associated fragment of larval skin and genitalia slide (275), Laventille, Port-of-Spain (St. George), F. W. Urich (USNM, 10018; selection of Howard, Dyar & Knab 1915: 425 and Stone and Knight 1957a: 44). BIONOMICS: Larvae in a small grassy pool.

41. Culex (Mel.) simulator Dyar & Knab, 1906. TYPE: Lectotype larva (47), Arima (St. George), 10 July 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 56). BIONOMICS: Larvae in a rather large pool in palm swamp far from civilization.

42. Culex (Mel.) spissipes (Theobald, 1903). TYPE: Holotype ♀, locality not specified, C. W. Hewlett (BM). BIONOMICS: [Larvae in permanent or semi-permanent ground waters].

*43. Culex (Mochlostyrax) caudelli (Dyar & Knab, 1906). TYPE: Lectotype larval skin (47), Arima (St. George), 10 July 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 45). BIONOMICS: Larvae in a rather large pool in palm swamp far from civilization.

44. Culex (Microculex) azymus Dyar & Knab, 1906. TYPE: Holotype ♀, Arima (St. George), F. W. Urich (USNM, 10020). BIONOMICS: Larvae in bromeliads.

45. Culex (Micr.) consolator Dyar & Knab, 1906. TYPE: Holotype ♂, Arima (St. George), F. W. Urich (USNM, 10019). BIONOMICS: Larvae in bromeliads.

46. Culex (Micr.) daumasturus Dyar & Knab, 1906 [= imitator]. TYPE: Lectotype fragmentary larval skin (43) with associated fragmentary pupal skin and ♀, Pitch Lake, La Brea (St. Patrick), 8 July 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 46). BIONOMICS: Larvae in "leaf axils of century plant growing on pitch lake," probably a terrestrial bromeliad.

47. Culex (Micr.) vector Dyar & Knab, 1906 [= imitator]. TYPE: Lectotype larval skin (B 12-1) with associated pupal skin and ♂, locality not specified, F. W. Urich (USNM; selection of Stone and Knight 1957a: 58). BIONOMICS: Larvae in bromeliads.

48. Culex (Micr.) inimitabilis Dyar & Knab, 1906. TYPE: Larvae, locality not specified, F. W. Urich (USNM; apparently lost, see Stone and Knight 1957a: 51). BIONOMICS: Larvae in bromeliads.

49. Culex (Micr.) stonei Lane & Whitman, 1943. TYPE: Lectotype ♂ (24-4) with genitalia slide (247), locality not specified, 11 Apr 1905, F. W. Urich (USNM; selection of Stone and Knight 1957a: 56). BIONOMICS: [Larvae in bromeliads].

*50. Culex (Aedinus) conservator Dyar & Knab, 1906. TYPE: Holotype larval skin (13.12) with associated pupal skin and ♂, St. Joseph (St. George), 15 June 1905, A. Busck (USNM; selection of Stone and Knight 1957a: 46). BIONOMICS: Larvae in hollow tree.

51. Culex (A.) divisor Dyar & Knab, 1906 [= conservator]. TYPE: Lectotype fragmentary larval skin (B 15-6) with associated fragmentary pupal skin and ♂, locality not specified, F. W. Urich (USNM; selection of Stone and Knight 1957a: 47-48). BIONOMICS: Larvae in hollow bamboo joint.

52. Culex (Carrollia) urichii (Coquillett, 1906). TYPE: Holotype ♀, St. Ann's valley, Port-of-Spain (St. George), Jan 1906, F. W. Urich (USNM, 9141). BIONOMICS: Larvae in open bamboo joints.

53. Deinocerites troglodytus Dyar & Knab, 1909 [= magnus]. TYPE: Holotype ♀ (26), Cedros (St. Patrick), 20-23 June 1905, A. Busck (USNM, 12128; see Stone and Knight 1957c: 197). BIONOMICS: Larvae in crabholes in mangrove swamp near ocean; water distinctly salty. Adults cling in large numbers to walls of holes.

54. Corethrella downsi Lane, 1943. TYPE: Holotype ♀, Montevideo, Sans Souci (St. David), 5 Aug 1942, W. G. Downs (FH). BIONOMICS: Larvae in leaf axils of bromeliad Aechmaea dichlamydea var. trinitensis.

55. Corethrella melanica Lane & Aitken, 1956. TYPE: Holotype ♀, St. Patrick Estate, 3.5 mile post, Arima Valley (St. George), elev. 800 ft, 6 Feb 1954, W. G. Downs (FH, 10556). BIONOMICS: Larvae in bamboo pots and once from a treehole.

56. Corethrella similans Lane & Aitken, 1956. TYPE: Holotype ♀, Tucker Valley, U. S. Naval Station, Chaguaramas (St. George), 20 Oct 1955, T. H. G. Aitken (FH, 11429). BIONOMICS: [Larvae habitat not known]. Adults collected at white light traps.

57. Dixella trinitensis (Lane, 1943). TYPE: Holotype ♂, near Piasco [Piarco] (St. George), 18 Jan 1942, R. C. Shannon (FH). BIONOMICS: [Larvae probably in forest swamps].

List of Localities

CARONI

Montserrat: 13. Wyeomyia (D.) pseudopecten; 26. Aedes (F.) laternaria; 34. Culex (C.) inquisitor.

ST. ANDREW

Sangre Grande: 2. Toxorhynchites (L.) superbus; 4. Toxorhynchites (L.) trinidadensis; 15. Phoniomyia lassalli; 36. Culex (C.) mollis.

ST. DAVID

Montevideo, Sans Souci: 54. Corethrella downsi.

ST. GEORGE

Agua Santa, near Arima: 5. Trichoprosopon (T.) nivipes; 20. Psorophora (J.) albipes; 29. Aedes (H.) sexlineatus.

Arima and Arima Valley: 6. Trichoprosopon (R.) rapax; 22. Aedes (O.) hortator; 31. Culex (C.) basilicus; 41. Culex (Mel.) simulator; 43. Culex (Mochl.) caudelli; 44. Culex (Micr.) azymus; 45. Culex (Micr.) consolator; 55. Corethrella melanica (St. Patrick Estate).

Locality not specified: see Trinidad (Locality not specified).

Piarco: 57. Dixella trinitensis.

Port-of-Spain: 15. Phoniomyia lassalli; 30. Haemagogus (S.) janthinomys (St. Ann's); 40. Culex (Mel.) bastagarius (Laventille); 52. Culex (Carrol.) urichii (St. Ann's Valley).

St. Joseph: 32. Culex (C.) coronator; 50. Culex (A.) conservator.

San Juan: 7. Wyeomyia (W.) bromeliarum; 8. Wyeomyia (W.) drapetes.

Tucker Valley, U. S. Naval Station, Chaguaramas: 56. Corethrella similans.

ST. PATRICK

Cedros: 21. Psorophora (G.) indoctum; 35. Culex (C.) extricator; 53. Deinocerites troglodytus.

La Brea, Pitch Lake: 1. Anopheles (K.) bellator; 9. Wyeomyia (W.) abascanta; 46. Culex (Micr.) daumasturus.

South coast, probably Los Blanquizales Lagoon: 33. Culex (C.) declarator; 38. Culex (C.) barbarus.

TRINIDAD (Locality not specified)

The majority of the collections were probably made in the north part of the island in the county of St. George in the localities listed above: 3. Toxorhynchites (L.) iris; 10. Wyeomyia (W.) telestica; 11. Wyeomyia (D.) autocratica; 12. Wyeomyia (D.) melanocephala; 14. Wyeomyia (D.) cara; 16. Phoniomyia trinidadensis; 17. Sabethes (S.) goeldii; 18. Sabethes (Sabethinus) undosus; 19. Psorophora (P.) saeva; 23. Aedes (O.) oligopistus; 24. Aedes (O.) serratus; 25. Aedes (F.) insolita; 27. Aedes (H.) palliatus; 28. Aedes (H.) ioliota; 37. Culex (C.) biocellatus; 39. Culex (Mel.) atratus; 42. Culex (Mel.) spissipes; 47. Culex (Micr.) vector; 48. Culex (Micr.) inimitabilis; 49. Culex (Micr.) stonei; 51. Culex (A.) divisor.

VENEZUELA

List of Species

1. Anopheles (A.) guarao Anduze & Capdevielle, 1949. TYPE: ♂, pupa, larva, Caripito (Monagas) (A). BIONOMICS: [Larvae probably in permanent ground waters].

2. Anopheles (A.) venezuelae Evans, 1922 [= punctimacula]. TYPE: Holotype ♀, La Cabrera (Carabobo), autumn 1921, M. Núñez Tovar (BM). BIONOMICS: [Larvae probably in shaded pools, swamps and sluggish streams].

3. Anopheles (Nyssorhynchus) delta Anduze, 1948 [= aquasalis]. TYPE: Adults, Pedernales (Delta Amacuro), date not specified (NE). BIONOMICS: [Larvae probably in brackish water or freshwater in tidal areas].

4. Anopheles (N.) guarauno Anduze, 1948 [= aquasalis]. TYPE: Adults, Pedernales (Delta Amacuro), date not specified (NE). BIONOMICS: [see delta above].

5. Anopheles (N.) benarrochi Gabaldon, Cova-Garcia & Lopez, 1941. TYPE: ♂, ♀, pupa, larva and egg, La Ceiba (Trujillo) (MDM). BIONOMICS: [Larvae probably in residual ponds, sunlit or partially shaded, with much organic matter].

6. Anopheles (N.) nuneztovari Gabaldon, 1940. TYPE: ♂, San Carlos (Cajedes) (MDM). BIONOMICS: [Larvae probably in muddy pools and small lagoons fully exposed to sun or partially shaded].

7. Anopheles (N.) rangeli Gabaldon, Cova-Garcia & Lopez, 1940. TYPE: ♂, pupa, larva and egg, Puerto Cabello (Carabobo) (MDM). BIONOMICS: [Larvae probably in hoofprints, ponds and small lagoons exposed to sun].

8. Anopheles (Kerteszia) bromelicola Dyar, 1925 [= bellator]. TYPE: Lectotype ♀, Manoa Woods (Delta Amacuro), 10 Jan 1910, F. L. de Verteuil (USNM; selection of Stone and Knight 1956b: 276). BIONOMICS: [Larvae in bromeliads].

9. Anopheles (Lophopodomys) vargasi Gabaldon, Cova-Garcia & Lopez, 1941. TYPE: ♂, ♀, pupa, larva and egg, Quebrada de la Cueva del Guácharo (Monagas) (MDM). BIONOMICS: [Larvae probably in shaded stream bed pools].

10. Toxorhynchites (Lynchiella) mara (Anduze, 1942) [= solstitialis].

TYPE: ♂, La Rivera, Río Escalante (Zulia) (IHC). BIONOMICS: [Larvae probably in bromeliads].

11. Wyeomyia (Wyeomyia) caracula Dyar & Núñez Tovar, 1927. TYPE: Holotype ♂, Mariara (Carabobo), 14 July 1927, M. Núñez Tovar (USNM). BIONOMICS: Larvae in bromeliads. Holotype bred from larva.

12. Wyeomyia (W.) gaudians Dyar & Núñez Tovar, 1927. TYPE: Lectotype ♂ on slide, Mariara (Carabobo), 14 July 1927, M. Núñez Tovar (USNM; selection of Stone and Knight 1957b: 123). BIONOMICS: Larvae in bromeliads. Lectotype bred from larva.

13. Wyeomyia (W.) gausapata Dyar & Núñez Tovar, 1927. TYPE: Holotype ♂, Ocumare de la Costa (Aragua), 12 Aug 1927, M. Núñez Tovar (USNM). BIONOMICS: Larva in bamboo joints but "probably normal to bromelias." Holotype reared from larva.

*14. Wyeomyia (Nunezia) bicornis (Root in Dyar, 1928). TYPE: Holotype ♂ (108/108.1) with genitalia slide, larval and pupal skins missing, Ocumare de la Costa (Aragua), 6 July 1927 (USNM, 44162; see Stone and Knight 1957b: 121). BIONOMICS: Larvae in bromeliads.

15. Wyeomyia (Dendromyia) pusillum (Lutz, 1928) [= confusa]. TYPE: ♀, pupa, Guayabita, near Turmero (Aragua) (LU). BIONOMICS: [Larvae probably in broken bamboo].

16. Wyeomyia (D.) felicia (Dyar & Núñez Tovar, 1927). TYPE: Lectotype ♂, Tío Julián (Aragua), 8 July 1927, M. Núñez Tovar (USNM; selection of Stone and Knight 1957b: 123). BIONOMICS: Larva in leaf bases of [aroid] "Elephant's Ear." Lectotype bred from larva.

17. Wyeomyia (D.) favor (Dyar & Núñez Tovar in Dyar 1928) [= jocosa]. TYPE: Holotype ♀, Rancho Grande (probably in Aragua or Carabobo), date not specified, M. Núñez Tovar (USNM). BIONOMICS: Larva in "saxicolous Bromelias" but more probably in an araceous plant. Holotype bred from larva.

18. Wyeomyia (D.) ocumarensis (Lutz, 1928) [= moerbista]. TYPE: ♀, Ocumare de la Costa (Aragua) (LU). BIONOMICS: [Larvae probably in broken bamboo, treeholes or leaf axils of plants].

19. Wyeomyia (D.) pampithes (Dyar & Núñez Tovar in Dyar 1928). TYPE: Holotype ♂, Rancho Grande, date not specified, M. Núñez Tovar (USNM). BIONOMICS: Larva in "saxilous Bromeliaceae" but more probably in an araceous plant. Holotype bred from larva.

20. Wyeomyia (D.) bicompressa (Lutz, 1928) [= pseudopecten]. TYPE: ♀, Turmero (Aragua) (LU). BIONOMICS: [Larvae probably in flower bracts of Heliconia].

21. Wyeomyia (D.) serratoria (Dyar & Núñez Tovar, 1927). TYPE: Holotype ♀, Villegas (Aragua), 9 Aug 1927, M. Núñez Tovar (USNM). BIONOMICS: Larva in bamboo joint. Holotype bred from larva.

22. Wyeomyia (D.) taurepana Anduze, 1941. TYPE: ♂, headwaters of Río Surukúm [Surucún] (Bolívar) (DPFA). BIONOMICS: [Larvae probably in broken bamboo, treeholes or leaf axils of plants].

23. Sabethes (S.) paraitepuyensis Anduze, 1941. TYPE: ♀, Paraitepui (Bolívar) (DPFA). BIONOMICS: [Larvae probably in treeholes with small lateral opening].

24. Sabethes (Sabethoides) rangeli (Surcouf & Gonzalez-Rincones, 1911) [= chloropterus]. TYPE: ♀, Maturín (Monagas), date not specified, M. Núñez Tovar (MNHP). BIONOMICS: [Larvae probably in treeholes or bamboo with small lateral opening].

25. Mansonia (Rynchotaenia) venezuelensis (Theobald in Surcouf, 1912).

TYPE: 2 ♀, Caño de la Viuda (MNHP and GDZ). BIONOMICS: [Larvae probably attached to rootlets of grasses and other herbaceous plants in mud in very shallow water of edges of swamps, ponds and streams].

26. Uranotaenia briseis Dyar, 1925. TYPE: Holotype ♀, Catatumbo River (Zulia), date not specified, L. H. Dunn (USNM, 28477). BIONOMICS: [Larvae probably in swamps].

27. Uranotaenia hystera Dyar & Knab, 1913. TYPE: Holotype ♂, Manoa (Delta Amacuro), Jan 1910, F. L. de Verteuil (USNM, 16001). BIONOMICS: [Larvae probably in large swamps or marshes].

28. Psorophora (P.) blanchardi Surcouf & Gonzalez-Rincones, 1911 [= lineata]. TYPE: ♂, ♀, Maturín (Monagas) (MNHP). BIONOMICS: [Larvae probably in sunlit grassy temporary pools].

29. Psorophora (Janthinosoma) tovari Evans, 1922 [= cyanescens]. TYPE: 2 ♀, region of Maracay (Aragua), 1921, M. Núñez Tovar (BM). BIONOMICS: [Larvae probably in temporary grassy ground pools in open areas].

30. Psorophora (Grabhamia) trigonophorus (Lutz, 1928) [= confinnis]. TYPE: ♂, ♀, San Jacinto (Aragua) (LU). BIONOMICS: [Larvae probably in open temporary ground pools of all types, especially hoofprints, road ruts and irrigation overflows].

31. Aedes (Ochlerotatus) traversus Dyar, 1925 [= angustivittatus]. TYPE: Lectotype ♀, sand bar on Zulia River (Zulia), date not specified, L. H. Dunn (USNM, 28480; selection of Stone and Knight 1956a: 226). BIONOMICS: [Larvae probably in temporary rainpools and overflows open to sun].

32. Aedes (Finlaya) upatensis Anduze & Hecht, 1943. TYPE: ♂, region of Upata, Distrito Piar (Bolívar) (FH). BIONOMICS: [Larvae in rockholes].

*33. Aedes (Soperia) dominicii (Rangel & Romero-Sierra, 1907). TYPE: ♀, Hacienda El Paraíso on Río Ananco [there is a Río Anaco in the state of Anzoátegui] (LU). BIONOMICS: [Larvae probably in bromeliads].

34. Aedes (Howardina) argyrites Dyar & Núñez Tovar, 1927. TYPE: Holotype ♀, locality, date and collector not specified (USNM). BIONOMICS: [Larvae probably in bromeliads or treeholes].

35. Aedes (H.) tachirensis Anduze, 1947 [= fulvithorax]. TYPE: ♀, Las Mesas de Seboruco, Dept. Jáuregui Táchira (Táchira) (A). BIONOMICS: [Larvae probably in treeholes].

36. Haemagogus (Haemagogus) celeste Dyar & Núñez Tovar, 1927 [= splendens]. TYPE: Lectotype ♂ (2270, "No. 3") with pupal skin (2270) [uncertain association] and genitalia slide (2770), Maracay (Aragua), 11 Nov 1926, M. Núñez Tovar (USNM; selection of Stone and Knight 1955: 287). BIONOMICS: [Larvae probably in treeholes or broken bamboo].

37. Culex (C.) beauperthuyi Anduze, 1943. TYPE: ♂, ♀, larva, pupa, Borburata (Carabobo) (IHC). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

38. Culex (C.) albertoi Anduze, 1943 [= coronator]. TYPE: ♂, Mesa de Escalante, near Río Guaruries, Distrito Tovar (Mérida) (IHC). BIONOMICS: [Larvae probably in ground waters].

39. Culex (C.) maracayensis Evans, 1923. TYPE: Holotype ♂, Maracay (Aragua), Oct 1922, M. Núñez Tovar (BM). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

40. Culex (Melanoconion) amitis Komp, 1936. TYPE: Lectotype ♂ genitalia slide, Quiriquire (Monagas), 14 June 1935 (USNM; selection of Stone and Knight 1957a: 43). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters]. Lectotype taken by sweeping.

41. *Culex* (Mel.) *innominatus* Evans, 1924 [= *bastagarius*]. TYPE: ♂, Palo Negro (Aragua), 30 Aug 1922, M. Núñez Tovar, Mariara (Carabobo), 11 Aug 1922, M. Núñez Tovar; also from Brazil (BM). BIONOMICS: [Larvae probably in grassy pools and stream margins].

42. *Culex* (Mel.) *macaronensis* Dyar & Núñez Tovar, 1927 [= *conspirator*]. TYPE: Holotype ♂ and genitalia slide [pinned specimen missing], Mácaro, date not specified, M. Núñez Tovar (USNM). BIONOMICS: [Larvae probably in grassy edges of streams or in rockholes].

43. *Culex* (Mel.) *inducens* Root in Dyar, 1928 [= *conspirator*]. TYPE: Lectotype ♂ (157.1 or 157.2) abdomen on slide (the one farthest from the determination label), association with corresponding pinned specimen uncertain, Maracay (Aragua), date and collector not specified (USNM; selection of Stone and Knight 1957a: 51). BIONOMICS: [Larvae probably in rockholes or in grassy edges of streams].

44. *Culex* (Mel.) *creole* Anduze, 1949. TYPE: ♂, Caripito (Monagas) (FH). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

45. *Culex* (Mel.) *vogelsangi* Anduze, 1949 [= *elevator*]. TYPE: ♂, Caripito (Monagas) (A). BIONOMICS: [Larvae probably in springs or rockholes in the shade].

46. *Culex* (Mel.) *ernsti* Anduze, 1949. TYPE: ♂, Caripito (Monagas) (A). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

47. *Culex* (Mel.) *tovari* Evans, 1924 [= *erraticus*]. TYPE: Holotype ♂, Palo Negro (Aragua), 30 Aug 1922, M. Núñez Tovar (BM). BIONOMICS: [Larvae probably in all types of grassy ground waters].

48. *Culex* (Mel.) *terepaima* Anduze, 1949 [= *idottus*]. TYPE: ♂, El Valle (Distrito Federal) (FH). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

49. *Culex* (Mel.) *lucifugus* Komp, 1936. TYPE: Holotype ♂ and genitalia slide [pinned specimen missing], Quiriquire, near Maturín (Monagas), 14 June 1935 (USNM). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

50. *Culex* (Mel.) *pifanoi* Anduze, 1949. TYPE: ♂, Caripito (Monagas) (A). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

51. *Culex* (Mel.) *venezuelensis* Anduze, 1949. TYPE: ♂, Caripito (Monagas) (FH). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

52. *Culex* (Mel.) *loturus* Dyar, 1925 [= *zeteki*]. TYPE: Holotype ♂, Catatumbo River (Zulia), date not specified, L. H. Dunn (USNM, 28476). BIONOMICS: [Larvae probably in grassy, more or less permanent, ground waters].

53. *Culex* (Mochlostyrax) *unicornis* Root in Dyar, 1928. TYPE: Lectotype ♂ genitalia on slide (92-[? 1]), Maracay (Aragua), 27 June 1927 (USNM; selection of Rozeboom and Komp 1950: 97; see Stone and Knight 1957a: 57). BIONOMICS: [Larvae probably in more or less permanent ground waters].

54. *Culex* (Microculex) *kukenan* Anduze, 1942. TYPE: ♂, ♀, La Gran Sabana, Surukúm [Surucún] (Bolívar) (FH). BIONOMICS: [Larvae probably in bromeliads].

55. *Culex* (Aedinus) *surukumensis* Anduze, 1941 [= *conservator*]. TYPE: ♂, Río Surukúm [Surucún] (Bolívar) (DPFA). BIONOMICS: [Larvae probably in treeholes or bromeliads].

56. *Culex* (A.) *paganus* Evans, 1923. TYPE: ♂, ♀, "from villages" (Aragua), 23 Aug 1922, M. Núñez Tovar (BM). BIONOMICS: [Larvae probably in treeholes or bromeliads].

57. Culex (Carrollia) bihaicolus Dyar & Núñez Tovar, 1927. TYPE: ♂, ♀, Ocumare de la Costa (Aragua), July 1927, M. Núñez Tovar (LU). BIONOMICS: Larvae in flower bracts of red-flowered Heliconia.

58. Culex (Carrol.) mathesoni Anduze, 1942. TYPE: ♂, Peñon de Paritepui (Bolívar) (IHC). BIONOMICS: [Larvae probably in treeholes, broken bamboo, plant parts on the ground or leaf axils].

59. Culex romeroi Surcouf & Gonzalez-Rincones, 1912; a new name for nigritulus of Romero Sierra, 1907. TYPE: ♀, no specimens seen by authors, Caracas (D. F.) (LU). BIONOMICS: [Larvae probably in permanent or semi-permanent ground waters].

60. Edwardsops stonei (Lane, 1942). TYPE: Holotype ♂, Maracaibo (Zulia), Sept 1938 or Jan 1940 (USNM). BIONOMICS: [Larvae probably in permanent or semi-permanent ground pools, possibly in treeholes].

61. Dixella venezuelensis (Lane, 1942). TYPE: Holotype ♂, Maracay (Aragua), July 1927, F. M. Root (BM). BIONOMICS: [Larvae probably in vegetation in margins of streams, ponds, lakes or swamps].

List of Localities

ARAGUA

Guayabita (Caño), near Turmero: 15. Wyeomyia (D.) pusillum.

Locality not specified: 56. Culex (A.) paganus.

Maracay: 29. Psorophora (J.) tovari; 36. Haemagogus (H.) celeste; 39. Culex (C.) maracayensis; 43. Culex (Mel.) inducens; 53. Culex (Mochl.) unicornis; 61. Dixella venezuelensis.

Ocumare de la Costa: 13. Wyeomyia (W.) gausapata; 14. Wyeomyia (N.) bicornis; 18. Wyeomyia (D.) ocumarensis; 57. Culex (Carrol.) bihaicolus.

Palo Negro: 41. Culex (Mel.) innominatus; 47. Culex (Mel.) tovari.

San Jacinto: 30. Psorophora (G.) trigonophorus.

Tío Julián: 16. Wyeomyia (D.) felicia.

Turmero: 20. Wyeomyia (D.) bicompressa.

Villegas (Caño): 21. Wyeomyia (D.) serratoria.

See also Venezuela (General)

BOLIVAR

Paraitepui [Peraitepui]: 23. Sabethes (S.) paraitepuyensis; 58. Culex (Carrol.) mathesoni (Peñón de Paritepui).

Surucún (Río), as Surukúm: 22. Wyeomyia (D.) taurepana; 54. Culex (Micro.) kukenan (La Gran Sabana); 55. Culex (A.) surukumensis.

Upata, Distrito Piar: 32. Aedes (F.) upatensis.

CARABOBO

Borburata: 37. Culex (C.) beauperthuyi.

La Cabrera: 2. Anopheles (A.) venezuelae.

Mariara: 11. Wyeomyia (W.) caracula; 12. Wyeomyia (W.) gaudians; 41. Culex (Mel.) innominatus.

Puerto Cabello: 7. Anopheles (N.) rangeli.

COJEDES

San Carlos: 6. Anopheles (N.) nuneztovari.

DELTA AMACURO (TER. FED.)

Manoa: 8. Anopheles (K.) bromelicola; 27. Uranotaenia hystera.

Pedernales: 3. Anopheles (N.) delta; 4. Anopheles (N.) guarauno.

DISTRITO FEDERAL

Caracas: 59. Culex romeroi.

El Valle, near Caracas: 48. Culex (Mel.) terepaima.

MERIDA

Mesa de Escalante, near Río Guarurries, Distrito Tovar: 38. Culex (C.) albertoi.

MONAGAS

Caripito: 1. Anopheles (A.) guarao; 44. Culex (Mel.) creole; 45. Culex (Mel.) vogelsangi; 46. Culex (Mel.) ernsti; 50. Culex (Mel.) pifanoi; 51. Culex (Mel.) venezuelensis.

Cueva El Guácharo (Quebrada de la): 9. Anopheles (L.) vargasi.

Maturín: 24. Sabethes (Sabethoides) rangeli; 28. Psorophora (P.) blanchardi.

Quiriquire: 40. Culex (Mel.) amitis; 49. Culex (Mel.) lucifugus.

TACHIRA

Las Mesas de Seboruco, Dept. Jáurequi: 35. Aedes (H.) tachirensis.

TRUJILLO

La Ceiba: 5. Anopheles (N.) benarrochi.

VENEZUELA (General)

Ananco (Río), Hacienda El Paraíso [? Río Anaco, state of Anzoátequi]: 33. Aedes (Sop.) dominicii.

Locality not specified: 34. Aedes (H.) argyrites.

Mácaro [? Macareo, Delta Amacuro]: 42. Culex (Mel.) macaronensis.

Rancho Grande; probably in Aragua or Carabobo: 17. Wyeomyia (D.) favor; 19. Wyeomyia (D.) pampithes.

Viuda (Caño de la); probably in Delta Amacuro or Monagas: 25. Mansonia (R.) venezuelensis.

ZULIA

Catatumbo (Río): 26. Uranotaenia briseis; 52. Culex (Mel.) loturus.

La Rivera, Río Escalante: 10. Toxorhynchites (L.) mara.

Maracaibo: 60. Edwardsops stonei.

Zulia (Río): 31. Aedes (O.) traversus.

VIRGIN ISLANDS

List of Species

1. Mansonia (M.) flaveola (Coquillett, 1906). TYPE: Holotype ♂, St. Thomas, Aug 1905, A. Busck (USNM, 8288). BIONOMICS: [Larvae probably attached to floating vegetation (Pistia) in permanent ground waters].

2. Aedes (Ochlerotatus) virginensis Dyar, 1922 [= tortilis]. TYPE: Holotype ♀, St. Thomas, Aug 1905, A. Busck (USNM, 24898). BIONOMICS: [Larvae probably in temporary rainpools].

3. Aedes (Stegomyia) fasciatus (Fabricius, 1805) [= aegypti]. TYPE: Adult, "Habitat in Americae insulis Mus. Dom. Lund"; probably from St. Croix (ZMC). BIONOMICS: [Larvae in domestic artificial containers].

4. Culex (C.) petersoni Dyar, 1920 [= bahamensis]. TYPE: Holotype ♂ (12), Leinster Bay, St. John, 22 Oct 1919, E. Peterson (USNM, 22689). BIONOMICS: Larvae in large shallow pond very near the seashore.

List of Localities

St. Croix: 3. Aedes (Steg.) fasciatus.

St. John: 4. Culex (C.) petersoni (Leinster Bay).

St. Thomas: 1. Mansonia (M.) flaveola; 2. Aedes (O.) virginensis.

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SYSTEMATIC INDEX

The names of the 752 topotypic Middle American species are in roman type. They are indexed individually with reference to the appropriate genus and subgenus (where applicable), as well as classified under the latter. In the classified portions, junior synonyms, subspecies or infrasubspecies are also listed under the name of the senior synonym or valid taxonomic species as given in the catalog of the mosquitoes of the world (Stone, Knight and Starcke 1959; Stone 1961, 1963). An asterisk (*) denotes a type species of a generic group taxon and a number sign (#) a replacement name. Extralimital senior synonyms are underscored and are listed only in the classified portion.

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